

BLUE BOOK

1948

for manufacturers and distributors of

SOAPS
INSECTICIDES
DISINFECTANTS
CHEMICAL SPECIALTIES
SANITARY SUPPLIES
POLISHES
CLEANERS

Issued Annually by the Publishers of

SOAP AND SANITARY CHEMICALS

NEW YORK



Copyright 1948
by
MacNAIR-DORLAND CO.

Depend on Du Pont TO SOLVE YOUR PERFUMING PROBLEMS

● Come to Du Pont early in your thinking about a new product . . . or about a needed lift for one already established. Our perfumers and chemists are ready to pool their talents with yours. And our complete facilities are at your disposal. Whatever the product, whatever the fragrance, you'll want to see us early . . . for you can always **DEPEND ON DU PONT.**

ALCOHOL C-8
ALCOHOL C-10
ALCOHOL C-12
ALPINE VIOLET* (Cyclamen Aldehyde)
AMBRENE*
ANISIC ALDEHYDE (Aubepine)
ASTROTONE* BR
BENZYL PROPIONATE
CEDRENE
CITRAL
COUMARIN
CUMINIC ALDEHYDE
CYCLOHEXYL BUTYRATE
DIMETHYL ANTHRANILATE

DIMETHYL HYDROQUINONE
GERANIOL
GERANYL ACETATE
HEXYL SALICYLATE
HYACYLENE P AND S (Dimethyl Acetal of Phenyl Acetaldehyde)
HYDROXYCITRONELLAL
INDOLE
ISO AMYL BENZYL ETHER
ISO BORNEOL
ISOBORNYL ACETATE
ISOBORNYL PROPIONATE
LAURYL ACETATE
METHYL ANTHRANILATE
METHYL "RHODIONE*" (Methyl Ionone)

MUGOL* (Dimethyl Acetal of Hydroxycitronellal)
MUSK AMBRETTE
MUSK XYLOL
OCTYL SALICYLATE
ORANGEOL N
PARA CRESOL METHYL ETHER
RHODINOL
RHODIONE* (Ionone)
TERPINEOL
TERPINYL ACETATE
TERPINYL PROPIONATE
TONKENE* P
VIOLET KETONE

*Trade-Mark.

E. I. du Pont de Nemours & Co. (Inc.)

Organic Chemicals Department
Aromatics Section

Wilmington 98, Delaware

Branch Offices: Atlanta, Boston, Charlotte,
Chicago, New York, Philadelphia, Providence,
San Francisco.



BLUE BOOK

1948

AN ANNUAL BUYERS GUIDE,
DIRECTORY AND REFERENCE
VOLUME FOR MANUFACTURERS
AND DISTRIBUTORS OF SOAPS,
INSECTICIDES, DISINFECTANTS,
POLISHES, CLEANERS AND
ALLIED CHEMICAL SPECIALTIES

Twentieth Edition

ISSUED ANNUALLY BY

MacNair-Dorland Company

254 West 31st Street

New York, N. Y.

JUL 1948

SR668.1 567

1342 c.1



Many manufacturers of soaps, insecticides and disinfectants know that this label is the mark of quality. They know, too, that Orbis is recognized as a dependable source for perfume compounds, fine domestic and imported essential oils, aromatic chemicals and gums—whole or powdered and insecticide concentrates.

Samples cheerfully furnished. Write us regarding your particular problem.

ORBIS INSECTICIDES

Cube Powder 4%-5% Rotenone
Derris Powder 4%-5% Rotenone
Cube Resins—Rotenone Content Standardized
Derris Resins—Rotenone Content Standardized
Rotenone Crystals C.P.
Rotenone Technical 90/95%
DDT Products

ORBIS AROMATIC CHEMICALS

Anethol
Carvacrol
Citral
Eucalyptol
Eugenol
Isoeugenol
Phellandrene
Safrol
Thymol
Chlorthymol
Heliotropine Chlorcarvacrol

ORBIS PERFUME COMPOUNDS

For Soap
Deodorants
Paras
Fly sprays
Insecticides
Sanitary specialties

ORBIS ESSENTIAL OILS

Oil Anise
Oil Bay
Oil Birch
Oil Cedarleaf
Oil Cedarwood
Oil Cassia
Oil Cloves
Oil Eucalyptus
Oil Lemon
Oil Lemongrass
Oil Limes
Oil Orange
Oil Peppermint
Oil Petitgrain
Oil Rosemary
Oil Sassafras
Oil Spearmint
Oil Thyme—Red
Oil Thyme—White
Oil Wormseed

ORBIS GUMS

Arabic
Karaya
Tragacanth
Locust

ORBIS

PRODUCTS

CORPORATION

215 PEARL STREET, NEW YORK
FACTORY AND LABORATORY: NEWARK, N. J.

COSMETIC RAW MATERIAL
WATER SOLUBLE GUMS
FOOD COLORS

PERFUME BASES
ESSENTIAL OILS
FRUIT FLAVORS

QUINCE SEED
OLEO RESINS
STEARIC ACID

WAXES
THYMOL
AROMATICS

CHICAGO PHILADELPHIA MEXICO, D.F. BOSTON LOS ANGELES

MEMPHIS, TENN.

Foreword

THIS issue of the BLUE BOOK has been produced under the most difficult conditions in the twenty year history of its publication. The strike of New York typographers is responsible for the late appearance of this 1948 edition, and the difficult conditions resulting from the strike may well, **we are afraid**, have introduced numerous errors into listings and advertisements. For such errors as may have been inevitable under the circumstances, and for the delayed appearance of this year's BLUE BOOK, we offer our apologies.

It is our purpose, naturally, to make the BLUE BOOK a complete and accurate directory of suppliers to the soap and sanitary products trade, and with this idea in mind we have tried to secure complete listings from all recognized suppliers of whom we know. It is inevitable, of course, that some firms have been overlooked, and if you find that listings for your own firm are missing, are incomplete, or otherwise inaccurate, we shall appreciate your advising us at once so that any errors can be corrected before appearance of our next edition. Do not, however, ask us to list you except under items which you actually make, which you import directly, or for which you are sole selling agents for a manufacturer.

A special explanatory note may be in order on our listings of sup-

pliers of finished products,—bulk and private brand soaps and sanitary products. The BLUE BOOK listings are not intended to be complete lists of all manufacturers of such products, but are planned to be limited to firms specializing in bulk and private brand sale of such products. Wherever possible we have eliminated from these lists the names of manufacturers whose prime concern is the sale of such products direct to actual consumers. Please keep this in mind in checking questionnaires for the next edition of the BLUE BOOK.

In addition to its role as a buyers' guide, the BLUE BOOK also serves as a year book for the soap and sanitary chemical industry. Included in the appendix are resumes of association and government specifications and official testing methods, data on sales of soap, oil and fat consumption, fat salvage collections, names of association officers, etc. We will welcome suggestions from users of the BLUE BOOK as to what other types of reference material would be useful to them in a book of this type and will be glad to consider adding new features to our next edition.

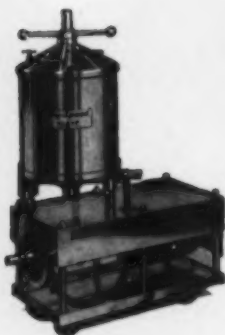
Replace your old 1947 BLUE BOOK with this new edition now,—and keep your current copy of the BLUE BOOK handy for ready reference! It contains the answers to many questions that will come up in the year ahead.

THE PUBLISHERS.

May 1, 1948

Alsop "HY-SPEED" Filters & Mixers

for dependable, low-cost,
time proven performance



"Sealed-Disc" Filters

Here's simplicity, portability and positive action in a single compact unit for removing dirt, sediment, etc., from all liquids. Its unique design assures unsurpassed performance with little or no supervision. You'll find this compact filter always ready for instant use, completely sealed, leak and drip-proof and easy to move to wherever needed. The entire filter can be taken apart for easy cleaning by simply removing the handle on top. The splash proof stand completely protects the built-in pump and motor from splashed or spilled liquids. Sizes range from 1 g.p.m. to thousands of g.p.h. and made of Stainless Steel, Monel Metal, Nickel Plated Brass and Bronze, etc.



"Hy-Speed" Portable Mixers

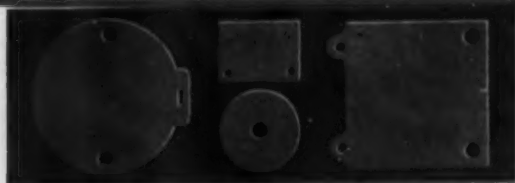
Our Portable Mixers of various sizes are meeting specific requirements with savings of time, labor and money in thousands of processing plants large and small. These low-priced mixers are sturdily constructed and simple to keep clean. Equipped with our easy-to-mount, quickly adjustable clamp, they make any tank a mixing tank or they can be attached to your present mixing tank to cut mixing time in half. Available in a wide range of horsepowers, propeller combinations and speeds.

"Hy-Speed" Stationary Agitators



Our complete line of agitators include the vertical type for mounting through the top of tanks and the side-entering type for mounting through the side walls of large tanks, in sizes up to 50 h.p. for thorough mixing.

We are prepared to design special types for your specific conditions and requirements.



We can supply Neutral Asbestos Filter-Discs cut to fit practically all size and type filters.

Over 25 years' Service to you

For over 25 years manufacturers of soaps and sanitary products have relied on the consistent high standard of Alsop Filters and Mixers—and on the technical service of The Alsop Engineering Corporation to help maintain efficient and economical production.

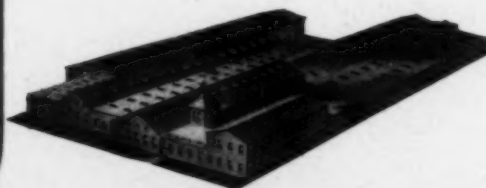
Filters and Mixers for all liquids

Our complete line of "Sealed-Disc" Filters are designed for all general batch or continuous filtration work on liquid soaps, insecticides, disinfectants, chemicals, drugs, alcohol, oils, acids, water, etc. Operation is instant and uniform and is equally effective for clarifying, final polishing or for removing turbid matter.

Alsop Neutral Filter Discs, the heart of Alsop Filters are made in eight different degrees of porosity, make available any degree of fineness of filtration your particular product may require.

Alsop "Hy-Speed" Mixers and Agitators are accepted as the standard of mixing efficiency wherever liquids are processed. Whether your operation involves mixing, blending, suspending or dissolving you can handle it simply and economically with a "Hy-Speed" Mixing Unit.

The diversity and completeness of our experience in Agitation and Filtration Engineering in all manufacturing and processing industries qualifies us to help you with your mixing and filtering operations. Call on us at any time, no obligation of course.



Our plant where "Sealed-Disc" Filters, Asbestos Discs and "Hy-Speed" Mixers are manufactured.

ALSOP

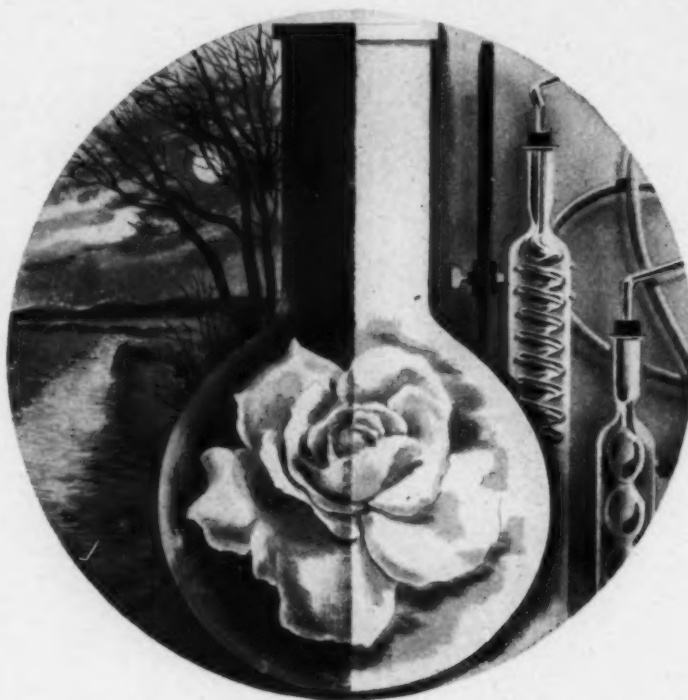
ENGINEERING CORPORATION

300 Green Street, Milldale, Connecticut

Buyers' Guide Section

LISTING SOURCES OF SUPPLY FOR RAW
MATERIALS, MACHINERY AND EQUIP-
MENT BOUGHT BY MANUFACTURERS OF
SOAPS AND SANITARY CHEMICALS.

*Included in this section are the names of
manufacturers of soaps and sanitary chemicals
who sell private brand and bulk products to
jobbers and distributors. It is not intended to
list concerns who sell direct to consumers.*



Dow Chemicals for the Soap Industry

Dow's array of materials for the soap and sanitary field ranges from fine Aromatics to the reliable "heavy" chemicals so essential to basic production operations. To aid the blender of scents, Dow is producing today a steady flow of aromatic products . . . provocative new materials as well as

the reliable, long-established products. Leading soap manufacturers look to Dow for the uniform product quality . . . the careful attention to delivery . . . that have been an integral part of Dow service for so many years. Additional information on any of these products is available on request.

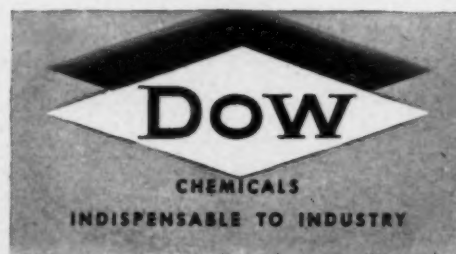
AROMATIC PRODUCTS: Coumarin, Cyclopentadiene, C-64, C-66, Diphenyl Oxide, Diphenyl Methane, Gardanthrol, Indole, Methyl Anthranilate, Methyl Phenyl Carbinyl Acetate, Methyl Salicylate, Palatone, Phenethyl Acetate, Phenethyl Alcohol, Styrene P-100, Sylvenol, and others.

INDUSTRIAL CHEMICALS: Caustic Soda, Phenol, Aniline, Ferric Chloride, Dowtherm, Diethylene Glycol, Propylene Glycol.

ORGANIC SOLVENTS: Carbon Tetrachloride, Ethylene Dichloride, Propylene Dichloride, o-Dichlorobenzene, Perchloroethylene.

FUNGICIDES, FUMIGANTS, DISINFECTANTS: Dowicides, Methyl Bromide, Carbon Bisulfide, Chloropicrin, Paradaw.

THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN
 New York • Boston • Philadelphia • Washington • Cleveland • Detroit
 Chicago • St. Louis • Houston • San Francisco • Los Angeles • Seattle
 Dow Chemical of Canada, Limited, Toronto, Canada



ABRASIVES AND FILLERS (Pumice, Silica, Feldspar, Bentonite, Clays, etc.)

American Colloid Co., 363 W. Superior St., Chicago
Aluminum Co. of America, Gulf Bldg., Pittsburgh, Pa.
Attapulugus Clay Co., 210 W. Washington Sq., Phila.
California Industrial Minerals Co., Friant, Calif.
Chas. B. Chrystal Co., 53 Park Pl., N. Y.
Dicalite Co., 120 Wall St., N. Y.
K. F. Griffiths Co., 110 E. 42nd St., N. Y.
Goris & Co., 8124 S. Hoyne Ave., Chicago
Hammill & Gillespie, 225 Broadway, N. Y.
Imperial Prods. Co., 1600 Fountain St., Phila.
Johns-Manville Corp., 22 E. 40th St., N. Y.
Monsanto Chem. Co., 1700 S. 2nd St., St. Louis
National Sawdust Co., 69 N. 6th St., Bklyn.
Natura Minerals Co., 108 W. 6th St., Los Angeles
Pacific Coast Pumice Co., Bishop, Calif.
Philadelphia Quartz Co., 125 S. 3rd St., Phila.
Pumice Corp. of America, Grants, N. M.
Jas. H. Rhodes & Co., 157 W. Hubbard St., Chicago
Wm. R. Rogers, 44 Woodman St., Lynn, Mass.
L. A. Salomon & Bro., 216 Pearl St., N. Y.
F. E. Schundler & Co., Inc., 524 Railroad St., Joliet, Ill.
A. E. Starkie, 5461 W. Division St., Chicago
Tamms Silica Co., 229 N. La Salle St., Chicago
United Clay Mines Corp., 101 Oakland St., Trenton, N. J.
R. T. Vanderbilt Co., 230 Park Ave., N. Y.
Chas. A. Wagner Co., 813 Callowhill St., Phila.
Whittaker Clark & Daniels, 260 W. B'way, N. Y.
Witeco Chemical Co., 295 Madison Ave., N. Y.

ACETONE (see also Dealers)

J. T. Baker Chem. Co., Phillipsburg, N. J.
Carbide & Carbon Chemicals Corp., 30 E. 42nd St., N. Y.
Cliffs-Dow Chemical Co., Marquette, Mich.
Commercial Solvents Corp., 17 E. 42nd St., N. Y.
E. I. Du Pont de Nemours, Wilmington, Del.
Wm. S. Gray & Co., 342 Madison Ave., N. Y.
Merck & Co., Rahway, N. J.
Monsanto Chemical Co., 1700 S. 2nd St., St. Louis, 4
Shell Chemical Corp., 100 Bush St., San Francisco
U. S. Industrial Chem., Inc., 60 E. 42nd St., N. Y.

ACIDS (Sulfuric, Muriatic, Nitric, Acetic, Etc.)

(see also Dealers)

American Cyanamid & Chem. Corp., 30 Rockefeller Plaza, N. Y.
Atlas Powder Co., Wilmington, Del.
J. T. Baker Chemical Co., Phillipsburg, N. J.
Blockson Chem. Co., Joliet, Ill.
Carbide & Carbon Chemicals Corp., 30 E. 42nd St., N. Y.
Dow Chemical Co., Midland, Mich.
E. I. Du Pont de Nemours & Co., Wilmington, Del.
General Chemical Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Hercules Powder Co., Wilmington, Del.
Hooker Electrochemical Co., Niagara Falls, N. Y. (Muriatic)
Innis, Speiden & Co., 117 Liberty St., N. Y.
Koppers Co., Koppers Bldg., Pittsburgh, Pa.
A. R. Maas Chem. Co., 4570 Ardine St., So. Gate, Calif.
Merck & Co., Rahway, N. J.
Michigan Chem. Corp., St. Louis, Mich.
Monsanto Chemical Co., 1700 S. 2nd St., St. Louis
Niagara Alkali Co., 60 E. 42nd St., N. Y.
Oronite Chem. Co., 200 Bush St., San Francisco
Penna. Salt Mfg. Co., 1000 Widener Bldg., Phila.
Rohm & Haas Co., Inc., 222 W. Washington Sq., Phila.
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Rumford Chem. Wks., Rumford, R. I.
Stauffer Chem. Co., 420 Lexington Ave., N. Y.
Jos. Turner & Co., Ridgefield, N. J.
Victor Chemical Wks., 141 W. Jackson Blvd., Chicago
Welch, Holme & Clark Co., 439 West St., N. Y.

ACTIVATED CARBONS, (see Bleaching Earths, Decolorizing Carbons)

ADHESIVES

Arabot Mfg. Co., 110 E. 42nd St., N. Y.
Armour Glue Wks., 1355 W. 31st St., Chicago
Bakelite Corp., 30 E. 42 St., N. Y.

Carbide & Carbon Chem. Corp., 30 E. 42nd St., N. Y.
Casein Co. of America, Bainbridge, N. Y.
Darling & Co., 4201 S. Ashland, Chicago
Dennison Mfg. Co., Framingham, Mass.
Diamond Alkali Co., Standard Silicate Div., 535 Smithfield St., Pittsburgh
E. I. Du Pont de Nemours & Co., Wilmington, Del.
W. H. Gage Glue Co., 19 S. Main St., St. Louis
General Chemical Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Hercules Powder Co., Wilmington, Del.
Arnold Hoffman Co., Providence, R. I.
Koppers Co., Koppers Bldg., Pittsburgh, Pa.
Monsanto Chemical Co., 1700 S. 2nd St., St. Louis
National Adhesives Corp., 270 Madison Ave., N. Y.
National Starch Products, Inc., 270 Madison Ave., N. Y.
Nopeco Chemical Co., Harrison, N. J.
Philadelphia Quartz Co., 125 S. 3rd St., Philadelphia
Rohm & Haas Co., 222 W. Washington Sq., Phila.
Sanford Mfg. Co., W. Congress & Peoria St., Chicago
Satisfaction Supply Co., 508 W. Broadway, N. Y.
A. E. Staley Mfg. Co., Decatur, Ill.
Stein, Hall & Co., 285 Madison Ave., N. Y.
Swift & Co., Chicago

AEROSOL DISPERSANTS

General Chemical Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Kinetic Chemicals, Inc., Wilmington

AEROSOL FILLING

Associated Chemists, Inc., 1906 N. Halstead St., Chicago
Continental Filling Corp., 123 N. Hazel St., Danville, Ill.
Industrial Management Corp., 458 S. Spring St., Los Angeles
Regal Chem. Corp., Bklyn., 22, N. Y.

AEROSOL INSECTICIDES (Containers and Dispensing Units)

Associated Chemists, Inc., 1906 N. Halstead St., Chicago
Bridgeport Brass Co., Bridgeport 2, Conn.
Continental Can Co., 100 E. 42nd St., N. Y.
Edco Corp., Elkton, Md.
Eston Chems., Inc., 3100 E. 26 St., Los Angeles
Industrial Management Corp., 458 S. Spring St., Los Angeles 13, Cal.
Regal Chemical Corp., Bklyn. 22, N. Y.
Salkover Metal Processing Co., Dixie Term. Bldg., Cincinnati
Sparklet Devices, Inc., 272 Badger Ave., Newark 8, N. J.
Virginia Smelting Co., W. Norfolk, Va.

AGITATORS

Allied Steel & Equip. Co., 1007 Springfield Ave., Irvington, N. J.
Alsop Engineering Corp., Milldale, Conn.
Amer. Machine & Foundry Co., 511-5th Ave., N. Y.
Beach-Russ Co., 50 Church St., N. Y.
Brill Equipment Co., 225 W. 34th St., N. Y.
Consolidated Prods. Co., 15 Park Row, N. Y. (Used)
J. H. Day Co., 1144 Harrison Ave., Cincinnati
Eastern Engineering Co., 45 Fox St., New Haven, Conn.
Ertel Engineering Corp., Kingston, N. Y.
Filter Paper Co., 2464 S. Michigan Ave., Chicago
First Machy. Corp., 157 Hudson St., N. Y. (Used)
Foster Pump Works, 50 Washington St., Brooklyn
Houchin Machinery Co., Hawthorne, N. J.
Huber Machine Co., 259 46th St., Brooklyn
J. M. Lehmann Co., Lyndhurst, N. J.
Littleford Bros., 443 E. Pearl St., Cincinnati
Mixing Equipment Co., Inc., 1067 Garson Ave. Rochester, N. Y.
Newman Tallow & Soap Machy. Co., 1051 W. 35th St., Chicago, Ill. (Used)
Pfaudler Co., 89 East Ave., Rochester, N. Y.
H. K. Porter Co., 49th & Harrison Sts., Pittsburgh
Read Machy. Co., York, Pa.
Scientific Filter Co., 1 Franklin Sq., N. Y.
Ernest Scott & Co., P. O. Box 82, Fall River, Mass.
Sowers Mfg. Co., 1296 Niagara St., Buffalo
Sprout Waldron & Co., Muncy, Pa.
Stein Equipment Corp., 90 West St., N. Y. C. (Used)
Struthers-Wells Titusville Corp., Warren, Pa.

Insecticide Manufacturers are cashing in on these POWCO BASIC MATERIALS — How About You?

HOUSEHOLD INSECTICIDE CONCENTRATES

Pyrethrum and DDT base insecticide concentrates for every household use. Investigate Pyrin — pyrethrum concentrate with added killing power; synergized with Sesamin.

AGRICULTURAL INSECTICIDE CONCENTRATES

There is a Powco Brand insecticide concentrate for every agricultural use. DDT, Pyrethrum, Rotenone, BHC, HETP and Sabadilla products. Name your insecticide problem and we'll name the insecticide.

RODENTICIDES

Powco Brand ANTU—Alpha Naphthyl Thiourea—the new wonder rodenticide. Economical, effective and deadly. Acceptable to rats, easy to use in baits, on water or as a tracking poison.

HERBICIDES

2,4-D (2,4-dichlorophenoxyacetic acid) in easy-to-use Powco formulations for the latest in selective weed killing. Let Powell solve your weed control problems. Investigate Powco Brand 2,4-D.

AEROSOL FORMULAS

Powell has specialized in aerosols since the first aerosol bomb. Completed aerosol formulas with pyrethrum and DDT—high or low pressure. Synergized with Sesamin for *greater* killing power at *lower* cost.

HOW WE REMOVE THE RISK

Chemically controlled and biologically standardized, Powco Brand products are manufactured to the most rigid specifications for your protection. Our labs test before we ask you to buy.

John Powell & Co., Inc.

ONE PARK AVENUE

NEW YORK 16, N. Y.

SALES OFFICES: CHICAGO - SAN FRANCISCO - PITTSBURGH - PHILADELPHIA - ST. LOUIS

CANADA: CHARLES ALBERT SMITH, LTD., TORONTO - MONTREAL

In Argentina — John Powell Y CIA, Condorco 1535, Buenos Aires, Argentina. Telephone 59, Paternal 0021.
POWCO BRAND PRODUCTS: Antu - Pyrin R - Pyrin D-20 - JP No. 10 - JP No. 25 - JP No. 30 - JP No. 50 - JP No. 50W - Pyrethrum Powders and Extracts - Stim'ox "A" - Rotenone Powders - Sabadilla - Aerosol Formulas - 2,4-D - BHC (Benzene Hexachloride) - HETP (Hexaethyl Tetraphosphate).

AGRICULTURAL INSECTICIDES

Agicide Laboratories, 1717 Taylor Ave., Racine, Wis.
Aluminum Co. of America, Gulf Bldg., Pittsburgh
American Agricultural Chem. Co., 50 Church St., N. Y.
American Cyanamid & Chem. Corp., 30 Rockefeller Plaza, N. Y.
An-Fo Mfg. Co., 3129 Elmwood Ave., Oakland, Calif.
Associated Chemists, Inc., 1906 N. Halsted St., Chicago
J. T. Baker Chem. Co., Phillipsburg, N. J.
Bowker Chemical Co., 50 Church St., N. Y.
California Spray Chemical Corp., Richmond, Calif.
Carbide & Carbon Chem. Corp., 30 E. 42nd St., N. Y.
Cenol Co., 4250 N. Pulaski Ave., Chicago
Chem. Mfg. & Dist. Co., Easton, Pa.
Chipman Chemical Co., Bound Brook, N. J.
Crystal Soap & Chem. Co., 6300 State Rd., Philadelphia
Dow Chemical Co., Midland, Mich.
E. I. Du Pont de Nemours & Co., Wilmington, Del.
Eagle Soap Corp., Huntington, Ind.
Eaton Chems., Inc., 3100 E. 26 St., Los Angeles
Fairfield Labs., Inc., 417 Cleveland Ave., Plainfield, N. J.
Filtrol Corp., 634 S. Spring St., Los Angeles
Geigy Co., 89 Barclay St., N. Y.
General Chem. Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
James Good, Inc., 2116 E. Susquehanna Ave., Phila.
Griffin Chem. Co., 1000 16th St., San Francisco
Hercules Powder Co., Wilmington, Del.
Hooker Electrochemical Co., Niagara Falls, N. Y.
Julius Hyman & Co., Denver, Colo.
Industrial Management Corp., 458 S. Spring St., Los Angeles
Koppers Co., White Tar Div., Kearny, N. J.
Lorenz Chemical Co., 135 N. 32nd Ave., Omaha
McLaughlin Gormley King Co., 1715-5th St., S. E. Minneapolis
Merck & Co., Rahway, N. J.
Michigan Chem. Corp., St. Louis, Mich.
Miller Products Co., 1932 S. W. Water Ave., Portland, Ore.
Neville Co., Neville Island, Pittsburgh
Nopco Chem. Co., First & Essex Sts., Harrison, N. J.
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
S. B. Penick & Co., 50 Church St., N. Y.
Penna. Salt Mfg. Co., 1000 Widener Bldg., Phila.
Richards Sales Corp., Warren & Morris Sts., Jersey City, N. J.
Rohm & Haas Co., 222 W. Washington Sq., Phila.
Schaeffer Bros. & Powell Mfg. Co., 102 Barton St., St. Louis, Mo.
Sherwin-Williams Co., Cleveland, Ohio
L. Sonneborn Sons, 88 Lex. Ave., N. Y.
Standard Oil Co. (Ind.), 910 S. Michigan Ave., Chicago
Standard Oil Co. (Calif.), 225 Bush St., San Francisco
Stauffer Chem. Co., 420 Lexington Ave., N. Y.
Thompson-Hayward Chem. Co., Kansas City, Mo.
Tobacco By-Products & Chem. Corp., Louisville, Ky.
James Varley & Sons, 1200 Switzer Ave., St. Louis
Whitmore Research Corp., 339 S. Vandeventer, St. Louis
Woburn Chemical Corp., Harrison, N. J.
G. H. Wood & Co., Toronto, Ont., Canada
York Chem. Co., 23 Dean St., Bklyn.

AGRICULTURAL INSECTICIDE SPREADERS

Alrose Chem. Co., Box 1294, Providence, R. I.
Aluminum Ore. Co., Gulf Bldg., Pittsburgh
American Colloid Co., 363 W. Superior St., Chicago
American Cyanamid & Chem. Corp., 30 Rockefeller Plaza, N. Y.
Attapulgis Clay Co., 210 W. Washington Sq., Phila.
Atlantic Refining Co., 260 South Broad St., Phila.
Atlas Powder Co., Wilmington, Del.
California Industrial Minerals Co., Friant, Calif.
Carbide & Carbon Chemicals Corp., 30 E. 42nd St., N. Y.
Colloidal Products Corp., 2598 Taylor St., San Francisco, Cal.
Crystal Soap & Chem. Co., 6300 State Rd., Philadelphia
Dicalite Co., 120 Wall St., N. Y.
E. I. Du Pont de Nemours & Co., Wilmington, Del.
Eastern Magnesia Talc Co., Burlington, Vt.
Emulsol Corp., 59 E. Madison St., Chicago
Griffin Chem. Co., 1000 16 St., San Francisco
Kay-Fries Chemicals, Inc., 180 Madison Ave., N. Y.
Kessler Chem. Co., 7272 State Rd., Phila.

Miranol Chemical Co., P.O. Box 118, Milltown, N. J.
Monsanto Chemical Co., 1700 S. 2nd St., St. Louis
Nopco Chemical Co., Harrison, N. J.
Richards Sales Corp., Jersey City, N. J.
Rohm & Haas Co., 222 W. Washington Sq., Phila.
F. E. Schundler & Co., 508 Railroad St., Joliet, Ill.
H. T. Vanderbilt Co., 230 Park Ave., N. Y.

ALCOHOL (Ethyl and Denatured)

(see also Dealers)

American Coml. Alcohol Corp., 405 Lexington Ave., N. Y.
J. T. Baker Chem. Co., Phillipsburg, N. J.
Carbide & Carbon Chemicals Corp., 30 E. 42nd St., N. Y.
Commerce Petroleum Co., 2923 S. Lock Ave., Chicago
Commercial Solvents Corp., 17 E. 42nd St., New York 17, N. Y.
E. I. Du Pont de Nemours & Co., Wilmington, Del.
Hercules Powder Co., Wilmington, Del.
Industrial Chem. Sales Div., West Va. Pulp & Paper Co., 230 Park Ave., N. Y.
Monsanto Chem. Co., 1700 S. 2nd St., St. Louis
Pennsylvania Sugar Co., 139 S. 3rd St., Phila.
Publicker Commercial Alcohol Co., 260 E. Broad St., Phila.
U. S. Industrial Chemicals, Inc., 60 E. 42nd St., N. Y.

ALCOHOL (Methyl or Wood) (see also Methanol,

(see also Dealers)

J. T. Baker Chem. Co., Phillipsburg, N. J.
Carbide & Carbon Chemicals Corp., 30 E. 42nd St., N. Y.
Cliffs-Dow Chemical Co., Marquette, Mich.
E. W. Colledge, General Sales Agent, Inc., P. O. Box 389, Jacksonville, Fla.
Commercial Solvents Corp., 17 E. 42nd St., New York 17, N. Y.
E. I. Du Pont de Nemours & Co., Wilmington, Del.
Hercules Powder Co., Wilmington, Del.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Industrial Chem. Sales Div., West Va. Pulp & Paper Co., 230 Park Ave., N. Y.
Merck & Co., Rahway, N. J.
Publicker Commercial Alcohol Co., 260 S. Broad St., Philadelphia
U. S. Industrial Chemicals, Inc., 60 E. 42nd St., N. Y.
Wood Products Co., Buffalo, N. Y.

ALCOHOL, ISO-PROPYL

Carbide & Carbon Chemicals Corp., 30 E. 42nd St., N. Y.
E. I. du Pont de Nemours & Co., Wilmington, Del.
Enjay Co., 15 W. 51st St., New York
Merck & Co., Rahway, N. J.
Shell Chemical Corp., 100 Bush St., San Francisco
U. S. Industrial Chemicals, Inc., 60 E. 42nd St., N. Y.

ALKALIES (see Caustic Soda, Soda Ash, Caustic Potash, etc.)

ALUMINUM CHIPS (for Drain Solvent)

Aluminum Co. of Amer., Gulf Bldg., Pittsburgh
Belmont Smelting & Ref. Co., 318 Belmont Ave., Bklyn., N. Y.
Reynolds Metals Co., 19 Rector St., N. Y.

ALUMINUM STEARATE (see Stearates)

ALUMS

(see also Dealers)

American Cyanamid & Chem. Corp., 30 Rockefeller Plaza, N. Y.
Armour Ammonia Wks., 1355 W. 31st St., Chicago
E. I. du Pont de Nemours & Co., Wilmington, Del.
General Chemical Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.



KEY BRAND Essential Oils

New Perfume Effects for "SOAPERS"—at new low prices—by blending KEY BRAND oils.

- KEY BRAND OIL OF ORANGE cold pressed U.S.P.
- KEY BRAND DISTILLED OIL OF ORANGE
- KEY BRAND OIL OF GRAPEFRUIT cold pressed
- KEY BRAND DISTILLED OIL OF GRAPEFRUIT
- KEY BRAND OIL OF MANDARIN cold pressed

Investigate now—the economy and high aromatic value of KEY BRAND oils.

Write for Samples and
Current Low Prices

FELTON CHEMICAL COMPANY INC.

MANUFACTURING CHEMISTS

599 JOHNSON AVE., BROOKLYN 6, N. Y.

AROMATIC CHEMICALS
FLAVORS



ESSENTIAL OILS
PERFUME OILS



Branches in Boston • Dallas • Philadelphia • San Francisco • Los Angeles • St. Louis • Chicago • Montreal • Toronto • Vancouver • Winnipeg

ALUMS (Contd.)

Harshaw Chemical Co., 1945 E. 97th St., Cleveland
Hercules Powder Co., Wilmington, Del.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Merck & Co., Rahway, N. J.
Monsanto Chem. Co., 1700 S. 2nd St., St. Louis
Penna. Salt Mfg. Co., 1000 Widener Bldg., Phila.

(Ammonia)
Rohm & Haas Co., Inc., 222 W. Washington Sq., Phila.
Siegel Chem. Co., 1 Hanson Pl., Brooklyn
Stauffer Chem. Co., 420 Lexington Ave., N. Y.
Welch, Holme & Clark Co., 439 West St., N. Y.

AMINOHYDROXY COMPOUNDS

Carbide & Carbon Chem. Corp., 30 E. 42nd St., New York
Commercial Solvents Corp., 17 E. 42nd St., N. Y.

AMMONIA, HOUSEHOLD (see Household Ammonia)

AMMONIA WATER

(see also Dealers)

American Cyanamid & Chem. Corp.,
30 Rockefeller Plaza, N. Y.
Barrett Div., Allied Chem. & Dye Corp., 40 Rector St.,
N. Y.
Cole Laboratories, 22-14—37th Ave.,
Long Island City, N. Y.
E. I. du Pont de Nemours & Co., Wilmington, Del.
Eastern Industries, Inc., Ridgefield, N. J.
General Chemical Div., Allied Chem. & Dye Corp., 40
Rector St., N. Y.
Mallinckrodt Chem. Wks., St. Louis
Mathieson Alkali Works, 60 E. 42nd St., N. Y.
Merck & Co., Rahway, N. J.
Monsanto Chem. Co., 1700 S. 2nd St., St. Louis
Penna. Salt Mfg. Co., 1000 Widener Bldg., Phila.
Rohm & Haas Co., Inc., 222 W. Washington Sq., Phila.
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Jos. Turner & Co., Ridgefield, N. J.

AMMONIUM BI-FLUORIDE (see Fluorides)

AMMONIUM CARBONATE

(see also Dealers)

American-British Chem. Supplies, Inc.,
180 Madison Ave., N. Y.
American Agricultural Chem. Co., 50 Church St., N. Y.
American Cyanamid & Chem. Corp.,
30 Rockefeller Plaza, N. Y.
J. T. Baker Chem. Co., Phillipsburg, N. J.
E. I. du Pont de Nemours & Co., Wilmington, Del.
Solvay Sales Div., Allied Chem. & Dye Corp., 40 Rector
St., N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Jos. Turner & Co., Ridgefield, N. J.

AMMONIUM CHLORIDE

American Cyanamid & Chem. Co.,
30 Rockefeller Plaza, N. Y.
J. T. Baker Chem. Co., Phillipsburg, N. J.
Croton Chem. Corp., 114 Liberty St., N. Y.
E. I. Du Pont de Nemours & Co., Wilmington, Del.
General Chemical Div., Allied Chem. & Dye Corp., 40
Rector St., N. Y.
Hercules Powder Co., Wilmington, Del.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Merck & Co., Rahway, N. J.
Penn. Salt Mfg. Co., Widener Bldg., Phila.
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Sergeant Chem. Co., 7 Dey St., N. Y.
Solvay Sales Div., Allied Chem. & Dye Corp., 40 Rector
St., N. Y.
Jos. Turner & Co., Ridgefield, N. J.

AMYL CINNAMIC ALDEHYDE (see Aromatic Chemicals)

AMYL SALICYLATE (see Aromatic Chemicals)

ANISE OIL (see Essential Oils)

ANT POISONS

American Cyanamid & Chem. Corp.,
30 Rockefeller Plaza, N. Y.
American Fluoride Corp., 151 W. 19th St., N. Y.
An-Fo Mfg. Co., 3129 Elmwood Ave., Oakland, Calif.
Associated Chemists, Inc., 1906 N. Halsted Ave., Chicago
Barton Chemical Co., 3907 S. Langley Ave., Chicago
California Spray-Chemical Corp., Richmond, Calif.
Geo. H. Conn Co., Freeport, Ill.
Chem. Mfg. & Dist. Co., Easton, Pa.
Chemical Supply Co., 220 Plymouth Bldg., Cleveland
Delta Chem. Co., 4 Payson Ave., N. Y.
Exterminating Materials Co., 555 W. 22nd St., N. Y.
Foots Mineral Co., 1609 Summer St., Phila.
Fuld Bros., 702 S. Wolfe St., Baltimore
Hysan Products Co., 932 W. 38th Place, Chicago
Imperial Prods. Co., 1600 Fountain St., Phila.
Ketoid Chem. Co., 339 S. Van Deventer, St. Louis
O. E. Linck Co., 51 James St., Montclair, N. J.
Maywood Pest Exterminators, 1413 Washington Blvd.,
Maywood, Ill.
Pfaltz & Bauer, Inc., Empire State Bldg. N. Y.
Sennewald Drug Co., Inc., 2723 Chouteau Ave., St. Louis
Texol Chem. Wks., 75 Ward St., Wooster, Mass.
Trio Chem. Wks., 341 Scholes St., Bklyn.
J. A. Tumbler Labs., 423 Hanover St., Baltimore
Uncle Sam Chem. Co., 573 W. 131st St., N. Y.
U. S. Sanitary Spec. Corp., 435 S. Western Ave., Chicago
W-B Chemical Co., Mt. Vernon, N. Y.
York Chemical Co., 23 Dean St., Bklyn.

ANTU CONCENTRATES

J. T. Baker Chem. Co., Phillipsburg, N. J.
E. I. du Pont de Nemours & Co., Wilmington
John Powell & Co., 1 Park Ave., N. Y.
R. J. Prentiss & Co., 110 William St., N. Y.

APPLICATORS (for Floor Wax)

American Standard Mfg. Co., 2509 S. Greene St., Chicago
Armstrong Cork Co., Lancaster, Pa.
Chem. Service of Baltimore, Howard & West Sts., Balto.
Churchill Mfg. Co., Galesburg, Ill.
Empire Brush Wks., Port Chester, N. Y.
Fuld Bros., 702 S. Wolfe St., Baltimore
H. Hertzberg & Son, Inc., 2300 Fifth Ave., N. Y.
Higley Chem. Co., Dubuque, Iowa
R. M. Hollingshead Corp., Camden, N. J.
H. D. Hudson Mfg. Co., 589 E. Illinois St., Chicago
Hysan Products Co., 932 W. 38th Place, Chicago
Lowell Mfg. Co., 589 E. Illinois St., Chicago
E. B. Moore & Co., 613 N. Parkside Ave., Chicago
Pioneer Mfg. Co., 3053 E. 87th St., Cleveland
Rex-Cleanwell Corp., Brazil, Ind.
Shane & Hays, Inc., 5300—21st St., Brooklyn, N. Y.
H. F. Staples Co., Medford, Mass.
Uncle Sam Chem. Co., 573 W. 131st St., N. Y.

ARSENATE OF LEAD (see Lead Arsenate)

ARSENICAL DIPS

Baird & McGuire, Inc., Holbrook, Mass.
California Spray-Chemical Corp., Richmond, Calif.
Chipman Chemical Co., Bound Brook, N. J.
Wm. Cooper & Nephews, 1909 Clifton Ave., Chicago
Fuld Bros., Baltimore
General Chemical Div., Allied Chem. & Dye Corp., 40
Rector St., N. Y.
James Good Co., Susquehanna Ave. & Martha Ave.,
Phila.
Hysan Prods., 932 W. 38th Place, Chicago
Kemiko Mfg. Co., 500 Chancellor Ave., Irvington, N. J.
Koppers Co., White Tar Div., Kearny, N. J.
McLaughlin, Gormley King Co., Minneapolis



150

YEARS

OF EXPERIENCE

ESTABLISH

D&O AS A NAME
AND SYMBOL PRE-EMINENT
IN THE FIELD OF
ESSENTIAL OILS,
CREATIVE PERFUME BASES,
AND *Aromatics*



DODGE & OLCOTT, Inc., 180 VARICK ST., NEW YORK 14, N. Y.
BRANCHES: BOSTON • CHICAGO • PHILADELPHIA • ST. LOUIS • LOS ANGELES
SAN FRANCISCO • PLANT AND LABORATORIES, BAYONNE, NEW JERSEY

ARSENICAL DIPS (Contd.)

Thompson-Hayward Chemical Co., 2915 Southwest Blvd.,
Kansas City, Mo.
U. S. Sanitary Spec. Corp., 435 S. Western Ave., Chicago
James Varley & Sons, 1200 Switzer Ave., St. Louis

ARSENIC (White Arsenic)

American Cyanamid & Chem. Corp.,
30 Rockefeller Plaza, N. Y.
American Smelting & Refining Co., 120 Broadway, N. Y.
J. T. Baker Chem. Co., Phillipsburg, N. J.
E. I. Du Pont de Nemours & Co., Wilmington, Del.
General Chemical Div., Allied Chem. & Dye Corp., 40
Rector St., N. Y.
Charles Hardy, Inc., 415 Lexington Ave., N. Y.
Harshaw Chemical Co., Cleveland
Innis, Speiden & Co., 117 Liberty St., N. Y.
Merck & Co., Rahway, N. J.
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Sergeant Chem. Co., 7 Dey St., N. Y.

AROMATIC CHEMICALS (for Perfuming)

Albert Albek, Inc., 515 S. Fairfax, Los Angeles
Allondon, Inc., 66 Dey St., N. Y.
American-British Chem. Supplies, Inc.,
180 Madison Ave., N. Y.
van Ameringen-Haebler, Inc., 315 Fourth Ave., N. Y.
Aromatic Products, Inc., 15 E. 30th St., N. Y.
Bendix Chem. Corp., 420 Lexington Ave., N. Y.
Bush Aromatics, Inc., 136 Liberty St., N. Y.
Centflor Mfg. Co., 450 W. 31st St., N. Y.
Ph. Chaleyer, Inc., 160 E. 56th St., N. Y.
Antoine Chiris Co., Inc., 119 W. 57th St., N. Y.
Compagnie Duval, Division S. B. Penick & Co., 50
Church St., N. Y.
Compagnie Parento, Inc., Croton-on-Hudson, N. Y.
Dodge & Olcott, Inc., 180 Varick St., N. Y.
Dow Chemical Co., Midland, Mich.
P. R. Dreyer Inc., 119 W. 19th St., N. Y.
A. C. Drury & Co., 219 East North Water St., Chicago
E. I. Du Pont de Nemours & Co., Wilmington, Del.
Felton Chemical Co., 603 Johnson Ave., Brooklyn
Firmenich & Co., 250 W. 18th St., N. Y.
Florasynth Laboratories, 1513 Olmstead Ave.,
Bronx, N. Y.
Benj. French, Inc., 160 Fifth Ave., N. Y.
Fritzsche Brothers, Inc., 76 Ninth Ave., N. Y.
General Drug Co., 644 Pacific St., Brooklyn
Givaudan-Delawanna, Inc., 330 W. 42nd St., N. Y.
Gunning & Gunning, 601 W. 26th St., N. Y.
Heyden Chemical Corp., 50 Union Square, N. Y.
D. W. Hutchinson & Co., 162 Front St., N. Y.
C. E. Ising Corp., Flushing, L. I., N. Y.
Kay-Fries Chemicals, Inc., 180 Madison Ave., N. Y.
Lautier Fils, Inc., 321 Fifth Ave., N. Y. C.
Pierre Lemoine, Inc., 67 Cortland St., N. Y.
Geo. Lueders & Co., 427 Washington St., N. Y.
Magnus, Mabey & Reynard, 16 Desbrosses St., N. Y.
A. Maschmeijer, Jr., Inc., 45 West 16th St., N. Y.
Monsanto Chemical Co., 1700 S. 2nd St., St. Louis
Naugatuck Aromatics, 254 Fourth Ave., N. Y.
Neumann-Buslee & Wolfe, 224 W. Huron St., Chicago
N. Y. Aromatics Co., 5 Beekman St., N. Y.
Norda Essential Oil & Chem. Co., 601 W. 26th St., N. Y.
Northwestern Chemical Co., Wauwatosa, Wis.
Noville Essential Oil Co., 157 Cedar St., N. Y.
Orbis Products Corp., 215 Pearl St., N. Y.
Perry Bros., Inc., 220 Flushing Ave., Brooklyn
Pfaltz & Bauer, Inc., 350 Fifth Ave., N. Y.
Polak's Frutal Wks., Inc., 36-14—35th St., L. I. City, N. Y.
Polak & Schwarz, Inc., 667 Washington St., N. Y.
Edw. Remus & Co., 11 W. 42nd St., N. Y.
Henri Robert, Inc., 39 W. 60 St., N. Y.
Roure-Dupont, 366 Madison Ave., N. Y.
H. C. Ryland, Inc., 161 Water St., N. Y.
Schimmel & Co., 601 W. 26th St., N. Y.
Edwin Seebach Co., 912 Broadway, N. Y.
Seeley & Co., 136 Liberty St., N. Y.
Wm. G. Sibbach & Co., 201 S. 2nd Ave., Maywood, Ill.
Sparhawk Co., Sparkill, N. Y.
Synfleur Scientific Labs., Monticello, N. Y.



Essential Oils

Citronella Java
Geranium Reunion
Patchouli Java — Vetiver



Aromatic Chemicals

Citronellol — Geraniol
Linalool — Rhodinol
Hydroxycitronellal



Perfume Bases
Perfume Compounds
Samples and prices
furnished on request



Centflor
Manufacturing Co., Inc.

450 West 31st Street
New York 1, New York
PE 6-1131



Manufacturers of Fine Organic Chemicals

for Soaps, Perfumes, Drugs, Pharmaceuticals, Plastics, Cosmetics,
Denaturing, Insecticides, Fumigation and other purposes.

AROMATIC CHEMICALS

Phenyl Ethyl Alcohol
Phenyl Ethyl Acetate
Benzyl Acetate
Benzyl Alcohol
Benzyl Benzoate
Alpha Amyl Cinnamic Aldehyde
Ethyl Phenyl Acetate
Nerolin (Beta-Naphthol Ethyl Ether)
Yara Yara (Beta-Naphthol Methyl Ether)

COAL TAR CHEMICALS

Cresylic Acid
Tar Acid Oil
High Boiling Tar Acids
Ortho-Cresol
Pyridine

FUMIGANTS

Methyl Formate
Ethyl Formate

PHARMACEUTICALS and INTERMEDIATES

Cyanacetamide
Ethyl Cyanoacetate
Methyl Cyanoacetate
Triethyl Orthoformate
Phenyl Acetic Acid
Methyl Phenyl Acetate
Benzyl Cyanide

PLASTIC CHEMICALS

Formaldehyde
Diethyl Phthalate
Dimethyl Phthalate
Dibutyl Phthalate

PENETROL

A neutral base for Pyrethrum and Rotenone Plant Sprays. Mixes easily with hard, cold water. Formulae and data available. A Spreader and Sticker for Solid Spray Materials.

IMPORTERS

American-British Chemical Supplies, Inc.
selling agents for

EXPORTERS



180 Madison Avenue, New York 16, N. Y.

Telephone MUrray Hill 6-0661

Cable Address: Bisulphide, New York City

MEMBER OF THE TENNANT GROUP OF COMPANIES
"Since 1797"

AROMATIC CHEMICALS (Contd.)

A. M. Todd Co., Kalamazoo, Mich.
 Tombarel Products Corp., 12 E. 22nd St., N. Y.
 Ungerer & Co., 161 Sixth Ave., N. Y.
 Van Dyk & Co., Belleville, N. J.
 Albert Verley, Inc., 440 W. Superior St., Chicago

ATOMIZERS (see Sprayers, Bottle)**AUTO SOAPS (see Potash Soaps)****BAGS (Cloth)**

Bemis Bro. Bag Co., 601 S. 4th St., St. Louis
 Central Bag & Burlap Co., 4513 S. Western Blvd., Chicago
 Chase Bag Co., 155 E. 44th St., N. Y.
 Dayton Bag & Burlap Co., Dayton, Ohio
 Filter Paper Co., 2464 S. Michigan Ave., Chicago
 Fulton Bag & Cotton Mills, Atlanta, Ga.
 Hammond Bag & Paper Co., Wellsburg, W. Va.
 Mente & Co., New Orleans, La.
 Paper Service Co., Lockland, Cincinnati
 Satisfaction Supply Co., 508 W. Broadway, N. Y. 12

BAGS AND BAG LINERS (Paper)

Arnell Safety Bag Co., 10 E. 40th St., N. Y.
 Bagpak Div., Int'l Paper Co., 220 E. 42nd St., N. Y.
 Bemis Bro. Bag Co., 601 S. 4th St., St. Louis
 Canister Co., Phillipsburg, N. J.
 Chase Bag Co., 155 E. 44th St., N. Y.
 Crepe-Kraft Co., 114 Adams St., Newark, N. J.
 Hammond Bag & Paper Co., Wellsburg, W. Va.
 Nashua Gummed & Coated Paper Co., Nashua, N. H.
 Paper Service Co., Box 107, Lockland, Cincinnati
 St. Regis Paper Co., 230 Park Ave., N. Y.
 Union Bag & Paper Co., 233 B'way, N. Y.

BAGS (Waterproof)

Bagpak Div., Int'l Paper Co., 220 E. 42nd St., N. Y.
 Bemis Bro. Bag Co., 601 S. 4th St., St. Louis
 Chase Bag Co., 155 E. 44th St., N. Y.
 Hammond Bag & Paper Co., Wellsburg, W. Va.
 Paper Service Co., P. O. Box 107, Lockland, Cincinnati
 St. Regis Paper Co., 230 Park Ave., N. Y.

BALSAMS

van Ameringen-Haebler, Inc., 315 Fourth Ave., N. Y.
 Aromatic Products, Inc., 15 E. 30th St., N. Y.
 Antoine Chiris Co., Inc., 119 W. 57th St., N. Y.
 Compagnie Duval, Division of S. B. Penick & Co., 50 Church St., N. Y.
 Compagnie Parento, Inc., Croton-on-Hudson, N. Y.
 Dodge & Olcott Inc., 180 Varick St., N. Y.
 P. R. Dreyer Inc., 119 W. 19th St., N. Y.
 A. C. Drury & Co., 219 E. North Water St., Chicago
 Florasynth Laboratories, 1513 Olmstead Ave, Bronx N. Y.
 Fritzsche Brothers, Inc., 76 Ninth Ave., N. Y.
 Givaudan-Delawanna, Inc., 330 W. 42nd St., N. Y.
 D. W. Hutchinson & Co., 162 Front St., N. Y.
 Geo. Lueders & Co., 427 Washington St., N. Y.
 Magnus, Mabey & Reynard, 16 Desbrosses St., N. Y.
 Norda Essential Oil & Chem. Co., 601 W. 26th St., N. Y.
 Orbis Products Corp., 215 Pearl St., N. Y.
 S. B. Penick & Co., 50 Church St., N. Y.
 Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
 Frank B. Ross Co., 507-8th St., Hoboken, N. J.
 H. C. Ryland, Inc., 161 Water St., N. Y.
 W. H. Scheel, Inc., 38 Franklin St., Bklyn.
 Schimmel & Co., 601 W. 26th St., N. Y.
 Synflour Scientific Labs., Inc., Monticello, N. Y.
 Tombarel Products Corp., 12 E. 22nd St., N. Y.
 Ungerer & Co., 161 6th Ave., N. Y.
 Albert Verley, Inc., 440 W. Superior St., Chicago

Established 1914

ESSENTIAL OILS

AROMATIC CHEMICALS

PERFUME COMPOUNDS

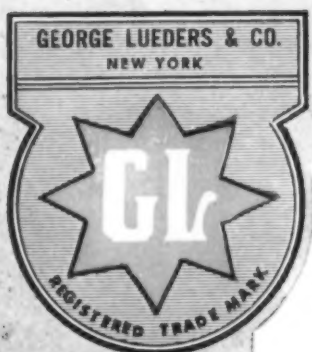
Blended Oils for all purposes; Perfumes,
 Cosmetics, Shampoos, Soaps, Sprays, etc.

DESCOLLONGES PRODUCTS

BENJ. FRENCH, INC.

160 FIFTH AVENUE

NEW YORK 10



AMERICAN DISTILLED OILS

PRODUCED AT OUR BROOKLYN FACTORY

OILS

CLOVE	STYRAX	OPOPONAX
NUTMEG	SANDALWOOD	PIMENTO
ORRIS LIQUID, CONC.		OLIBANUM

also

LINALOOL	CITRAL	EUGENOL
----------	--------	---------

RESIN LIQUIDS

OLIBANUM	ORRIS	BALSAM PERU
LABDANUM		BALSAM TOLU
OPOPONAX	STYRAX	TONKA

Essential Oils • Aromatic Chemicals • Perfume Materials • Colors

GEORGE LUEDERS & CO

427 WASHINGTON STREET, NEW YORK 13, N. Y.

CHICAGO • SAN FRANCISCO • MONTREAL • ST. LOUIS • PHILADELPHIA • LOS ANGELES • TORONTO

ESTABLISHED 1885



BARIUM CARBONATE

Alton Barium Prods. Co., Alton, Ill.
American Cyanamid & Chem. Corp.,
30 Rockefeller Plaza, N. Y.
J. T. Baker Chem. Co., Phillipsburg, N. J.
Croton Chem. Corp., 114 Liberty St., N. Y.
E. I. Du Pont de Nemours & Co., Wilmington, Del.
Fexandie & Sperrle, 205 Fulton St., N. Y.
Foote Mineral Co., 1609 Summer St., Philadelphia
Harshaw Chemical Co., 1945 E. 97th St., Cleveland
Innis, Speiden & Co., 117 Liberty St., N. Y.
Merck & Co., Rahway, N. J.
Westvaco Chlorine Prods. Corp., 405 Lexington Ave.,
N. Y.
Witco Chemical Co., 295 Madison Ave., N. Y.
York Chem. Co., 23 Dean St., Bklyn.

BARREL LINERS (see Bags and Bag Liners)

BARRELS (Fibre)

Canister Co., Phillipsburg, N. J.
Carpenter Container Co., 147-41st St., Brooklyn
Champion Container Co., Water & Morris Sts., Phila.
Columbia Can Co., 315 Wyckoff Ave., Brooklyn
Container Co., Van Wert, O.
Diamond State Fibre Co., Bridgeport, Pa.
Inland Steel Container Co., 6532 S. Menard Ave., Chicago
Master Package Corp., Owen, Wis.
Rogers Fibre Co., 210 Lincoln St., Boston
Seymour & Peck Co. (Plywood)
565 W. Washington St., Chicago
Spaulding Fibre Co., Rochester, N. H.

BARRELS (Steel)

American Cooperage Co., Mauer, N. J.
American Steel Package Co., Defiance, O.
Columbia Can Co., 315 Wyckoff Ave., Brooklyn
Draper Mfg. Co., Cleveland
Fetter Steel Barrel Corp., Buffalo
Globe Steel Barrel Co., Cleveland
Inland Steel-Container Co., 6532 S. Menard St., Chicago
Manion Steel Barrel Co., Rouseville, Pa.
National Steel Barrel Co., 3860 E. 91st St., Cleveland
Niles Steel Prod. Co., Niles, Ohio
Petroleum Iron Works Co., Sharon, Pa.
Pittsburgh Can Co., Pittsburgh
Pressed Steel Tank Co., Milwaukee, Wis.
Republic Steel Package Co., 7930 Jones Rd., Cleveland
Rheem Mfg. Co., 570 Lexington Ave., N. Y.
St. Louis Steel Package Co., St. Louis
John Trageser Steam Copper Works,
Grand Ave., Maspeth, L. I., N. Y.
U. S. Steel Prods. Co., 30 Rockefeller Plaza, N. Y.
Vulcan Stamping & Mfg. Co., Bellwood, Ill.
Wackman Welded Ware Co., 7th & Victor Sts., St. Louis
Wheeling Corrugating Co., Wheeling, W. Va.

BARRELS (Wooden)

A. Z. Cooperage Co., 4550 Taffin St., Chicago
American Cooperage Co., Barber, N. J.
Bauer Cooperage Works, G.F., 1415 W. 31st St., Phila.
Boston Cooperage Co., South Boston, Mass.
Brooklyn Cooperage Co., 120 Wall St., New York
Burkhartsmeier Cooperage Co., 7240-54 S. Chicago Ave.,
Chicago
Chess & Wymond, Inc., Louisville
Eizner Company, John, 1050 W. Kinzie St., Chicago
Fessenden Companies, Inc., Townsend, Mass.
General Cooperage Co., Phila.
Johnson Co., Inc., T., 1046 W. 38th St., Chicago
Kimball-Tyler Co., Gough and Haven Sts., Baltimore
Kingsland Cooperage Co., Newark, N. J.
Klausner Cooperage Co., 5207 Grant Ave., Cleveland
Louisville Cooperage Co., Louisville
Milwaukee Cooperage Co., 3030 W. Auer Ave., Milwaukee
Newman Tallow & Soap Machy. Co., 1051 W. 35th St.,
Chicago

Oker Sons Co., Cincinnati
Pioneer Cooperage Co., St. Louis
Pioneer Cooperage Co., Chicago
Redlich Mfg. Co., Chicago
Ritzweller Co., Chicago
St. Louis Cooperage Co., 101 Arsenal St., St. Louis
Siemon & Sons, 1750 N. Front St., Phila.
Stainmets & Sons, 4638 Mitchell St., Detroit
Stolper Cooperage Co., 3232 W. Fondulac, Milwaukee
Verdi Brothers Cooperage Co., North Bergen, N. J.
T. & W. Wehmier, Latonia, Ky.

BARREL TILTERS

Economy Eng. Co., 2651 W. Van Buren St., Chicago

BASE OILS (see Petroleum Insecticide Base Oils)

BATH SALTS

Eagle Soap Corp., Huntington, Ind.
Gaylord Chemical Co., 701 Woodswether Rd., Kansas
City, Mo.
Higley Chem. Co., Dubuque, Iowa
Hysan Prods. Co., 932 W. 38th Place, Chicago
Imperial Prods. Co., 1600 Fountain St., Phila.
Jansen Soap & Chemical Co.,
324 Leavenworth St., San Francisco, Calif.
Lightfoot-Schultz Co., 1412 Park Ave., Hoboken, N. J.
M. & H. Laboratories, 2705 Archer Ave., Chicago
Miranol Chem. Co., P. O. Box 118, Milltown, N. J.
Port Huron Detergent Co., Port Huron, Mich.
Richards Sales Corp., Jersey City, N. J.
Schmidt Soap Products, 236 W. North Ave., Chicago
Schratz, Inc., 534 W. Congress, Detroit
Skotch Prods. Corp., 2710 Detroit Ave., Cleveland
E. B. Snyder Labs., 2137 E. Harold St., Philadelphia
Solway Sales Div., Allied Chem. & Dye Corp., 40 Rector
St., N. Y. (Unperfumed)
Trio Chem. Wks., 341 Scholes St., Bklyn.
Welch, Holme & Clark Co., 439 West St., N. Y.
Allen B. Wrisley Co., 6801 W. 65th St., Chicago

BAY RUM

P. R. Dreyer Inc., 119 W. 19th St., N. Y.
A. C. Drury & Co., 219 East North Water St., Chicago
Chas. L. Huisking & Co., 155 Varick St., N. Y.
Lanman & Kemp-Barclay Co., 135 Water St., N. Y.
McKesson & Robbins, 155 E. 44th St., N. Y.
S. B. Penick & Co., 50 Church St., N. Y.
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Tombarel Products Corp., 12 E. 22nd St., New York
Ungerer & Co., 161 Sixth Ave., N. Y.

BELLOWS, (Blowers for Insecticide Powders)

Acemline, Inc., Traverse City, Mich.
Central Rubber Products Co., 823 Broadway, N. Y.
Electric Sprayit Co., 1415 Illinois Ave.,
Sheboygan, Wis.
Feeny Mfg. Co., Muncie, Ind.
Getz Exterminators, Inc., 1130 Pine St., St. Louis
Thomas W. Houchin Corp., 87 Ferry St.,
Jersey City, N. J. (also Bulbs)
Lowell Mfg. Co., North Pier Terminal, Chicago
Scollay Sprinkler & Bulb Co., Box 46, Sta. F, Bklyn.
N. Y.
York Chem. Co., 23 Dean St., Bklyn.

BENTONITE

American Colloid Co., 363 W. Superior St., Chicago
American Cyanamid & Chem. Corp.,
30 Rockefeller Plaza, N. Y.
Attapulugus Clay Co., 210 W. Washington Sq., Phila.
Chas. B. Chrystal Co., 53 Park Pl., N. Y.
Filtrol Corp., 634 S. Spring St., Los Angeles
Hammill & Gillespie, 225 Broadway, N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Natura Minerals Co., 108 W. 6th St., Los Angeles
Owyhee Chemical Products Co.,
300 W. Adams St., Chicago



Call
FULD
for . . .

DEODORANT BLOCKS

LIQUID CLEANERS

INSECTICIDES

LIQUID, OIL AND BASE SOAPS

WAXES

DISINFECTANTS

POLISHES

FLOOR SEALS AND TREATMENTS

PLUMBING SPECIALTIES

SPECIAL CLEANERS

BOILER COMPOUNDS

CLEANING COMPOUNDS

SOAP DISPENSERS

DEODORANT BLOCK HOLDERS

○ **SPECIALISTS IN SPECIFICATION FORMULAE**

Fuld
Brothers

- 702 South Wolfe Street, Baltimore 31, Maryland
- 2444 East 8th Street, Los Angeles 21, California
- New York Sales Office: 55 W. 42nd St., CH. 4-2538

BENTONITE (Contd.)

L. A. Salomon & Bro., 216 Pearl St., N. Y.
F. E. Schundler & Co., Joliet, Ill.
Silica Products Co., 700 Baltimore Ave., Kansas City, Mo.
A. E. Starkie Co., 5461 W. Division St., Chicago
Tamms Silica Co., 228 N. La Salle St., Chicago
United Clay Mines Corp., 101 Oakland St., Trenton, N. J.
Chas. A. Wagner Co., 813 Callowhill St., Phila.
Welch, Holme & Clark Co., 439 West St., N. Y.
Whittaker, Clark & Daniels, 260 W. Broadway, N. Y.
Witco Chemical Co., 295 Madison Ave., N. Y.
Wyodak Chemical Co., 4600 E. 71st St., Cleveland

BENZALDEHYDE

van Ameringen-Haebler, Inc., 315 Fourth Ave., N. Y.
Aromatic Products, Inc., 15 E. 30th St., N. Y.
Compagnie Parento, Inc., Croton-on-Hudson, N. Y.
Dodge & Olcott Inc., 180 Varick St., N. Y.
Dow Chemical Co., Midland, Mich.
P. R. Dreyer Inc., 119 W. 19th St., N. Y.
E. I. du Pont de Nemours & Co., Wilmington, Del.
Felton Chemical Co., 603 Johnson Ave., Brooklyn
Florasynth Laboratories, 1513 Olmstead Ave., Bronx, N. Y.
Fritzsche Brothers, Inc., 76 Ninth Ave., N. Y.
Givaudan-Delawanna, Inc., 330 W. 42nd St., N. Y.
Heyden Chem. Co., 60 Union Sq., N. Y.
Magnus, Mabee & Reynard, 16 Desbrosses St., N. Y.
Merck & Co., Rahway, N. J.
Orbis Products Corp., 215 Pearl St., N. Y.
Schimmel & Co., 601 W. 26th St., N. Y.
Tombarel Products Corp., 12 E. 22nd St., New York
Ungerer & Co., 161 Sixth Ave., N. Y.
Van Dyk & Co., Belleville, N. J.
Albert Verley, Inc., 440 W. Superior St., Chicago

BENZENE (Benzol)

Barrett Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
S. H. Bell Co., 1407 Gulf Bldg., Chicago
Wm. Cooper & Nephews, 1909 Clifton Ave., Chicago
Hydrocarbon Products, 500 Fifth Ave., N. Y.
Koppers Co., Koppers Bldg., Pittsburgh, Pa.
Neville Co., Pittsburgh

BENZENE HEXACHLORIDE

Dow Chemical Co., Midland, Mich.
E. I. du Pont de Nemours & Co., Wilmington, Del.
J. T. Baker Chem. Co., Phillipsburg, N. J.
Commercial Solvents Corp., 17 E. 42nd St., N. Y.
Eston Chemicals, Inc., 3100 E. 26 St., Los Angeles
General Chemical Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Hooker Electrochemical Co., 4701 Buffalo Ave., Niagara Falls, N. Y.
Monsanto Chemical Co., 1700 S. 2nd St., St. Louis
Pennsylvania Salt Mfg. Co., 1000 Widener Bldg., Phila.
Stauffer Chemical Co., 420 Lexington Ave., N. Y.
Westvaco Chlorine Products Corp., 405 Lexington Ave., N. Y.

BERGAMOT OIL (see Essential Oils)

BICHROMATES

American-British Chem. Supplies, Inc.,
180 Madison Ave., N. Y.
American Cyanamid & Chem. Corp.,
30 Rockefeller Plaza, N. Y.
Diamond Alkali Co., 535 Smithfield St., Pittsburgh
E. I. du Pont de Nemours & Co., Wilmington, Del.
Merck & Co., Rahway, N. J.
Mutual Chem. Co. of America, 270 Madison Ave., N. Y.
Natural Prods. Refining Co., Jersey City, N. J.
Prior Chem. Corp., 420 Lexington Ave., N. Y.
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Sergeant Chemical Co., 7 Dey St., N. Y.
Jos. Turner & Co., Ridgefield, N. J.

BLEACHING AGENTS (Chlorine, Peroxide, Bichromates, etc.)

American Cyanamid & Chem., Corp.,
30 Rockefeller Plaza, N. Y.
Buffalo Electro Chem. Co., Buffalo, N. Y.
Diamond Alkali Co., 535 Smithfield St., Pittsburgh
Diversey Corp., 53 W. Jackson Blvd., Chicago
E. I. du Pont de Nemours & Co., Wilmington, Del.
Hercules Powder Co., Wilmington, Del.
Hooker Electrochemical Co., Niagara Falls, N. Y.
Industrial Chem. Sales Div., West Va. Pulp & Paper Co.,
230 Park Ave., N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Lucidol Corp., 293 Larkin St., Buffalo
Mathieson Chemical Corp., 60 E. 42nd St., N. Y.
Niagara Alkali Co., 60 E. 42nd St., N. Y.
Penna. Salt Mfg. Co., 1000 Widener Bldg., Phila.
Pittsburgh Plate Glass Co., Columbia Chemical Div.,
Grant Bldg., Pittsburgh
Rohm & Haas Co., 222 W. Washington Sq., Phila.
Sergeant Chem. Co., 7 Dey St., N. Y.
Solvay Sales Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Stauffer Chem. Co., 420 Lexington Ave., N. Y.
Jos. Turner & Co., Ridgefield, N. J.
Westvaco Chlorine Prods. Co., Chrysler Bldg., N. Y.
Wyandotte Chemicals Corp., Michigan Alkali Div.,
Wyandotte, Mich.

BLEACHING EARTHS and CARBONS (see also Clays)

American Colloid Co., 363 W. Superior St., Chicago
American Cyanamid & Chem. Corp.,
30 Rockefeller Plaza, N. Y.
Attapulugus Clay Co., 210 W. Washington Sq., Phila.
Chas. B. Chrystal Co., 53 Park Pl., N. Y.
Dicalite Co., 120 Wall St., N. Y.
Filtrol Corp., 634 S. Spring St., Los Angeles
Hammill & Gillespie, 225 Broadway, N. Y.
J. M. Huber, Inc., 460 W. 34th St., N. Y.
Illinois Silica Co., Cairo, Ill.
Industrial Chem. Sales Div., West Va. Pulp & Paper Co.,
230 Park Ave., N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Peerless Clay & Mineral Co., Pueblo, Colo.
L. A. Salomon & Bro., 216 Pearl St., N. Y.
Sinclair Refining Co., East Chicago, Ind.
A. E. Starkie Co., 5461 W. Division St., Chicago
Tamms Silica Co., 228 N. LaSalle St., Chicago
Chas. A. Wagner Co., 813 Callowhill St., Phila.
Whittaker, Clark & Daniels, 260 W. Broadway, N. Y.
Witco Chemical Co., 295 Madison Ave., N. Y.
Wyodak Chem. Co., 4600 E. 71st St., Cleveland

BLEACHING EQUIPMENT (for Oils), (see Deodorizing Equipment)

BLEACHING POWDER (Chloride of Lime)

American Cyanamid & Chem. Corp.,
30 Rockefeller Plaza, N. Y.
Diversey Corp., 53 W. Jackson Blvd., Chicago
E. I. du Pont de Nemours & Co., Wilmington, Del.
Hooker Electrochemical Co., Niagara Falls, N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Mathieson Chemical Corp., 60 E. 42nd St., N. Y.
Niagara Alkali Co., 60 E. 42nd St., N. Y.
Penna. Salt Mfg. Co., 1000 Widener Bldg., Phila.
Pittsburgh Plate Glass Co., Columbia Chemical Div.,
Grant Bldg., Pittsburgh
Sergeant Chem. Co., 7 Dey St., N. Y.
Stauffer Chem. Co., 420 Lexington Ave., N. Y.
Jos. Turner & Co., Ridgefield, N. J.
Welch, Holme & Clark Co., 439 West St., N. Y.

BLOCK HOLDERS (see Holders, Deodorizing Block)

BLOWERS for POWDER INSECTICIDES (see Bellows)

Here's your "BEST SELLER"

In this one catalogue . . . get
**ALL THE FACTS
AND FIGURES**
**ON AMERICA'S FASTEST-
GROWING CHEMICAL LINE!**

Complete information on 112 chemical products
. . . anything and everything you need for a
steady business at a steady profit.

Fill out and send us the coupon below. We'll
send you the catalogue that is destined to be
your "best seller"!



**CHEMICAL SERVICE
OF BALTIMORE**

Howard & West Sts., Baltimore 30, Md.

MANUFACTURERS OF QUALITY SOAPS, WAXES, DISINFECTANTS
INSECTICIDES, FLOOR FINISHES, CHEMICAL SPECIALTIES



Contains full data on

**LAB-WAX
and ALKATROL**

"De-alkalized" cleaner

Chemical Service of Baltimore
Howard & West Streets
Baltimore 30, Maryland

Please rush me the "Lab" Catalogue,
free of charge.

Name

Address

BLOWERS, ELECTRIC (see Sprayers, Electric)

BLUING (see Laundry Blue)

BOILER COMPOUNDS

American Colloid Co., 363 W. Superior St., Chicago
Ampion Corp., 47-02 5th St., Long Island City, N. Y.
Baum's Castorine Co., Rome, N. Y.
Carbide & Carbon Chem. Corp., 30 E. 42nd St., N. Y.
Chemical Supply Co., Plymouth Bldg., Cleveland
Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
Churchill Mfg. Co., Galesburg, Ill.
Delta Chem. Co., 4 Payson Ave., N. Y.
Eagle Soap Corp., Huntington, Ind.
Fuld Bros., 702 S. Wolfe St., Baltimore
Goulard & Olen, Inc., 140 Liberty St., N. Y.
Hawk-Eye Compound Co., Blue Island, Ill.
Hercules Chem. Co., 332 Canal St., N. Y.
Higley Chem. Co., Dubuque, Iowa
R. M. Hollingshead Corp., Camden, N. J.
Hysan Prods. Co., 932 W. 38th Place, Chicago
Kamen Soap Prods. Co., Woolworth Bldg., N. Y.
Kemiko Mfg. Co., 500 Chancellor Ave., Irvington, N. J.
J. F. Kerns Chem. Prods., 2239 S. Michigan Ave., Chicago
Mathieson Chemical Co., 60 E. 42nd St., N. Y.
Midland Labs., Dubuque, Iowa
Peck's Products Co., St. Louis
Permutit Co., 330 W. 42nd St., N. Y.
Reilly Tar & Chemical Corp., Indianapolis, Ind.
Richards Sales Corp., Jersey City, N. J.
Theo. B. Robertson Prods. Co., 700 Division St., Chicago
Solshine Mfg. Co., 423 Second St., Fall River, Mass.
John Sunshine Chem. Co., 604 W. Lake St., Chicago
Trio Chem. Wks., 341 Scholes St., Bklyn.
Trojan Products & Mfg. Co., 3107 S. Wabash Ave., Chicago
Ultra Chem. Wks., P.O. Box 1536, Paterson, N. J.
U. S. Sanitary Specialties Corp., 435 S. Western Ave., Chicago
Welch, Holme & Clark Co., 439 West St., N. Y.
Wyandotte Chem. Corp., Wyandotte, Mich.

BOIS de ROSE OIL (see Essential Oils)

BORAX (and Boric Acid)

American Cyanamid & Chem. Corp., 30 Rockefeller Plaza, N. Y.
American Potash & Chem. Corp., 233 Broadway, N. Y.
Croton Chem. Corp., 114 Liberty St., N. Y.
E. I. Du Pont de Nemours & Co., Wilmington, Del.
General Chemical Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Harshaw Chemical Co., 1945 E. 97th St., Cleveland
Innis, Speiden & Co., 117 Liberty St., N. Y.
Pacific Coast Borax Co., 51 Madison Ave., N. Y.
Pittsburgh Plate Glass Co., Columbia Chem. Div., Pittsburgh
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Sergeant Chem. Co., 7 Dey St., N. Y.
Stauffer Chem. Co., 420 Lexington Ave., N. Y.
Jos. Turner & Co., Ridgefield, N. J.
Welch, Holme & Clark Co., 439 West St., N. Y.
Witeco Chemical Co., 295 Madison Ave., N. Y.

BORIC ACID (See Above)

BOTTLES

American Bottle Co., Toledo, O.
Armstrong Cork Co., Lancaster, Pa.
Anchor Hocking Glass Corp., Lancaster, Ohio
Capstan Glass Co., Connelville, Pa.
Foster-Forbes Glass Co., Marion, Ind.
Graham Glass Co., Evansville, Ind.
Hazel Atlas Glass Co., Wheeling, W. Va.
Kimble Glass Co., Vineland, N. J.
Maryland Glass Corp., Baltimore, Md.
Millville Bottling Wks., Millville, N. J.
Owens Illinois Glass Co., Toledo, O.
F. E. Reed Glass Co., 860 Maple St., Rochester, N. Y.

Root Glass Co., Terre Haute, Ind.
Ruth Glass Co., Conshohocken, Pa.
Tygart Valley Glass Co., Washington, Pa.
T. C. Wheaton Co., Millville, N. J.

BOTTLE FILLING MACHINERY (see Filling Machinery, Bottles)

BOTTLE WASHERS (see Washing Machinery, Bottle)

BOX LINERS (see Bag Liners)

BOXES (Corrugated and/or Fibre)

Brooklyn Fibre Syndicate, Decatur St. & Irving Ave., Brooklyn
Cambridge Paper Box Co., 196 Broadway, Cambridge, Mass.
Consolidated Paper Co., Monroe, Mich.
Container Corp. of America, 111 W. Washington St., Chicago
Robert Gair Co., 155 E. 44th St., N. Y.
Gardner-Richardson Co., Middletown, O.
Hinde & Dauch Paper Co., 222 Decatur St., Sandusky, O.
F. J. Kress Box Co., 2390 Liberty Ave., Pittsburgh
Owens-Illinois Glass Co., Toledo, O.
River Raisin Paper Co., Monroe, Mich.

BOXES (Fancy Paper)

Alderman-Fairchild Co., 367 Orchard St., Rochester, N. Y.
Baxter Paper Co., Brunswick, Me.
F. N. Burt Co., Ltd., 540 Seneca St., Buffalo, N. Y.
C. J. Fox Co., 236 Aborn St., Providence, R. I.
Foxon Paper Co., 230 West Park St., Providence, R. I.
Robert Gair Co., 155 E. 44th St., N. Y.
Gardner-Richardson Co., Middletown, O.
R. R. Heywood, Inc., 26th St. & 9th Ave., N. Y.
R. J. Kittredge Co., 812 W. Superior St., Chicago
Pictorial Package Co., Aurora, Ill.
Piqua Paper Box Co., Piqua, O.
Potomac Lithograph Mfg. Co., Washington, D. C.
W. C. Ritchie & Co., 8801 S. Baltimore Ave., Chicago
Robert Paper Box Co., Montville, Conn.
Geo. Schmitt & Co., Grand & Florence Sts., Brooklyn
Strobridge Lithographing Co., Norwood Station, Cincinnati
Sutherland Paper Co., Kalamazoo, Mich.
U. S. Printing & Lithographing Co., Norwood, Cincinnati
Universal Folding Box Co., Monroe & 13th Sts., Hoboken, N. J.
Carl Voss Corp., Hoboken, N. J.

BOXES (Fancy Wooden)

Pilliod Cabinet Co., Swanton, O.

BROKERS (Chemicals)

S. H. Bell Co., 1407 Gulf Bldg., Pittsburgh
John A. Chew, Inc., 60 E. 42nd St., N. Y.
Dickerson Co., Drexel Bldg., Phila.
Griffin Chem. Co., 1000 16th St., San Francisco
Otto A. C. Hagen Co., Public Ledger Bldg., Phila.
Arnold Hoffman Co., Providence, R. I.
Chas. L. Huisking & Co., 155 Varick St., N. Y.
Leo Pasternak, Inc., 110 William St., N. Y.
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
George Uhe, Inc., 80 Eighth Ave., N. Y.

BROKERS (Oils and Fats)

Irving R. Boody Co., 99 Wall St., N. Y.
Davidson Commission Co., 327 S. La Salle St., Chicago
John W. Hall, 327 S. La Salle St., Chicago
Otto A. C. Hagen Co., Public Ledger Bldg., Phila.
Hentz & Co., 60 Beaver St., N. Y.
Arnold Hoffman Co., Providence, R. I.
Chas. Hollingshead Co., Produce Exchange, N. Y.
Horner Commission Co., 15 William St., N. Y.
E. G. James Co., 316 S. La Salle St., Chicago



Announcing Continental's New "Fingertip" Aerosol Container

Special features of the low-pressure "Fingertip" container

1. Low cost
2. Designed for high-speed automatic filling.
3. Easy, dependable action.
4. Light but sturdy.
5. Low shipping costs due to valve position under top of double seam.
6. Easy stacking for counter display.
7. Internal coatings to suit product.

Here's the most effective, practical and economical low-pressure aerosol container you've ever seen.

Designed like a flat-top beer can—it is called "Fingertip" because the key to its many advantages is its new, highly efficient fingertip valve.

Although the "Fingertip" container is light and low in cost, tests with insecticides show it delivers the same knock-down and killing properties as high-pressure aerosols.

See the panel at the left for its "7 features" and you'll understand why this new container is ideal for insecticides . . . how it can be readily used for many other products.

If interested, write our nearest Sales Office for a comprehensive booklet on low-pressure aerosols.

CONTINENTAL  CAN COMPANY

100 East 42nd Street

New York 17, N. Y.

BROKERS (Oils and Fats) (Contd.)

Kullman & Co., 339 Produce Exchange, N. Y.
 Marwood Co., 221 N. LaSalle, Chicago
 Miller & Co., 2401 Chestnut St., Philadelphia
 Rayner & Stonington, Inc., 79 Wall St., N. Y.
 J. H. Redding Co., 17 Battery Pl., N. Y.
 Roesling, Monroe & Co., 133 Front St., N. Y.
 Rosenthal-Berrow Co., 25 E. 26th St., N. Y.
 Sterne & Son Co., Board of Trade Bldg., Chicago
 Wm. M. Ware & Co., 88 Broad St., Boston
 Weaver & Hugl, Inc., Produce Exchange Bldg., N. Y.
 Welch, Holme & Clark Co., Inc.
 439 West St., N. Y.
 G. A. Wharry & Co., 95 Broad St., N. Y.
 Wilbur-Ellis Co., 17 Battery Pl., N. Y.
 Wilson Brokerage, Inc., Produce Exchange, N. Y.

BROOMS

Alabama Broom & Mattress Co., Huntsville, Ala.
 Detroit Quality Brush Mfg. Co.,
 5937 Michigan Ave., Detroit
 Eagle Woodenware Co., Hamilton, O.
 Flour City Brush Co., Minneapolis
 Illinois Brush Mfg. Co., 3316 Ogden Ave., Chicago
 Kendallville Brush & Broom Co., Kendallville, Ind.
 Tate Mfg. Co., 67 Sudbury St., Boston, Mass.
 M. J. Toohey & Co., Fall River, Mass.

BRUSHES

American Standard Mfg. Co., 2509 S. Green St., Chicago
 Detroit Quality Brush Mfg. Co.,
 5937 Michigan Ave., Detroit
 Jos. O. Flatt & Co., 141 Cedar St., Reading, Pa.
 Flour City Brush Co., 301 Fifth Ave., So., Minneapolis
 J. I. Holcomb Co., Indianapolis
 Illinois Duster & Brush Co., 1944 Webster Ave., Chicago
 W. E. Kautenberg Co., P. O. Box 255, Freeport, Ill.
 Kendallville Brush & Broom Co., Kendallville, Ind.
 National Brush Co., Aurora, Ill.
 Opie Brush Co., Kansas City, Mo.
 Ox Fibre Brush Co., Frederick, Md.
 Pacific Coast Brush Co., Los Angeles
 Palmer Prods., Inc., Waukesha, Wisc.
 Pioneer Mfg. Co., Cleveland, O.
 Sanitax Brush & Prods. Co., 230 E. Ohio St., Chicago
 Silver-Chamberlin Co., Clayton, N. J.
 Sullivan Brush Co., Terre Haute, Ind.
 Tate Mfg. Co., 67 Sudbury St., Boston, Mass.

CAJUPUT OIL (see Essential Oils)**CALCIUM HYPOCHLORITE**

Hooker Electrochemical Co., Niagara Falls, N. Y.
 Innis, Speiden & Co., 117 Liberty St., N. Y.
 Mathieson Chemical Co., 60 E. 42nd St., N. Y.
 Niagara Alkali Co., 60 E. 42nd St., N. Y.
 Penn. Salt Mfg. Co., Widener Bldg., Phila.
 Pittsburgh Plate Glass Co., Columbia Chemical Div.,
 Grant Bldg., Pittsburgh
 Jos. Turner & Co., Ridgefield, N. J.
 Universal Chlorinator Co., 3418 W. Pico Blvd., Los
 Angeles
 Wyandotte Chemicals Corp., Michigan Alkali Div.,
 Wyandotte, Mich.

CALCIUM STEARATE (see Stearates)**CAMPHOR OIL (see Essential Oils)****CAN FILLING MACHINERY (see Filling Machinery,
Cans)****CANDELILLA WAX (see Waxes)****1948 BLUE BOOK****CAN SPOUTS AND NOZZLES**

Crown Cork Specialty Corp., Decatur, Ill.
 George D. Ellis & Sons, 309 N. 3rd St., Phila.
 Seal Spout Corp., 363 Jelliff Ave., Newark, 8, N. J.
 (for cartons)
 Standard Containers, Inc., 484 Bloomfield Ave., Mont-
 clair, N. J.
 U-Pressit Corp., 420 Lexington Ave., N. Y.

CANS (Fibre or Paper)

American Can Co., 230 Park Ave., N. Y.
 Cambridge Box Co., 196 Broadway,
 Cambridge, Mass.
 Canister Co., Phillipsburg, N. J.
 Cin-Made Corp., 294 Eggleston Ave., Cincinnati
 Cleveland Container Co., 10630 Berea Rd., Cleveland
 Columbia Can Co., 315 Wyckoff Ave., Brooklyn
 Continental Can Co., 100 E. 42nd St., N. Y.
 Cross Paper Products Co., 2595 Third Ave., N. Y.
 Fonda Container Co., 41 Park Row, N. Y.
 Gardner-Richardson Co., Middletown, O.
 Master Package Corp., Owen, Wis.
 Middlesex Paper Tube Co., 342 Madison Ave., N. Y.
 Midwest Paper Container Co., 707 N. 3rd St., Minneapolis
 National Paper Can Co., Cudahy, Wis.
 Packard Container Corp., 5811 Park Ave., West New
 York, N. J.
 R. C. Can Co., 121 Chambers St., St. Louis
 W. C. Ritchie & Co., 8801 S. Baltimore Ave., Chicago
 Sealright Co., 500 Fifth Ave., N. Y.
 Sutherland Paper Co., Kalamazoo, Mich.

CANS (Sifter Top)

American Can Co., 230 Park Ave., N. Y.
 Anchor Hocking Glass Corp., Lancaster, Ohio
 Cambridge Paper Box Co., 196 Broadway,
 Cambridge, Mass.
 Canister Co., Phillipsburg, N. J.
 Cans, Inc., 3217 W. 47th Pl., Chicago
 Cleveland Container Co., 10630 Berea Rd., Cleveland
 Cin-Made Corp., 294 Eggleston Ave., Cincinnati
 Continental Can Co., Inc., 100 E. 42nd St., N. Y.
 Crown Can Co., Erie Ave. & H St., Phila.
 Middlesex Paper Tube Co., 342 Madison Ave., N. Y.
 National Can Co., 110 E. 42nd St., N. Y.
 Owens-Illinois Can Co., Toledo, O.
 Packard Container Corp., 5811 Park Ave., West New
 York, N. J.
 R. C. Can Co., 121 Chambers St., St. Louis
 W. C. Ritchie & Co., 8801 S. Baltimore Ave., Chicago
 Sefton Fibre Can Co., 3275 Big Bend Blvd., St. Louis
 Standard Container, Inc., Bloomfield, N. J.
 Sutherland Paper Co., Kalamazoo, Mich.

CANS (Steel) (See Pails, Steel)**CANS (Tin)**

American Can Co., 230 Park Ave., N. Y.
 Anchor Hocking Glass Corp., Lancaster, Ohio
 Central Can Co., 2415 W. 19th St., Chicago
 Cans, Inc., 3217 W. 47th Pl., Chicago
 J. L. Clark Mfg. Co., Rockford, Ill.
 Columbia Can Co., 315 Wyckoff Ave., Brooklyn
 Continental Can Co., Inc., 100 E. 42nd St., N. Y.
 Crown Can Co., Erie Ave. & H St., Phila.
 George D. Ellis & Sons, 309 N. 3rd St., Phila.
 Fein's Tin Can Co., Bush Terminal, Brooklyn
 General Can Co., 1603 S. Canal St., Chicago
 Heekin Can Co., Cincinnati
 National Can Co., 110 E. 42nd St., N. Y.
 W. F. Robertson Steel & Iron Co., Springfield, O.
 St. Louis Can Co., 904 S. 14th St., St. Louis
 Standard Container, Inc., Bloomfield, N. J.
 Vulcan Tin Can Co., Bellwood, Ill.

CAPPING MACHINERY

Alsop Engineering Corp., 100 High St., Milldale, Conn.
 Anchor Hocking Glass Corp., Lancaster, Ohio

Over 50 years **A LEADER**



For more than fifty years the name of Chuit, Naef has been synonymous with the production of the highest quality group of synthetic and aromatic chemicals obtainable. Today, as then, this reputation continues unmatched. // Throughout these years the Chuit, Naef organization has expanded its products to the point where they now rank as the most complete line of perfume raw materials available to the toilet goods, perfume extract and soap fields. // As sole United States agents, let us convince you of the remarkable adaptability of our products to your line—and our ability to deliver!

FIRMENICH & CIE.
S U C C E S S E U R S D E
CHUIT, NAEF & CIE.

GENÈVE

SUISSE

CHICAGO OFFICE:
612 NORTH MICHIGAN AVENUE

FIRMENICH & CO.
250 WEST 19th STREET, NEW YORK 11, N.Y.

IN CANADA: CARAMÉED, LTD.
350 WALLACE AVENUE, TORONTO

CAPPING MACHINERY (Contd.)

Consolidated Packaging Machinery Corp.,
1400 West Ave., Buffalo
Consolidated Prods. Co., 15 Park Row, N. Y. (Used)
Crown Cork & Seal Co., Baltimore, Md.
Filter Paper So., 57 E. 24th St., Chicago
First Machy. Corp., 157 Hudson St., N. Y. (Used)
R. G. Haskins Co., 615 S. California St., Chicago
Hornney & Co., 420 Lexington Ave., N. Y.
Karl Kiefer Machine Co., 919 Martin St., Cincinnati, Ohio
Ludcke Co., 41 N. Beacon St., Watertown, Mass.
M. R. M. Co., 191 Berry St., Bklyn.
Newman Tallow & Soap Machy. Co., 1051 W. 35th St.,
Chicago
Phoenix Metal Cap Co., 2444 W. 16th St., Chicago
Pneumatic Scale Corp., North Quincy, Mass.
Scientific Filter Co., 1 Franklin Sq., N. Y.
Stein Equipment Co., 90 West St., N. Y. (Used)
Triangle Package Machy. Co.,
910 N. Spaulding Ave., Chicago
U. S. Bottlers Mch. Co., 4015 N. Rockwell St., Chicago

CAPPING MATERIALS

Anchor Hocking Glass Corp., Lancaster, Ohio
Aridor Co., 3428 W. 48th Place, Chicago
Crown Cork Specialty Corp., Decatur, Ill.
Du Pont Cellophane Co., 2 Park Ave., N. Y.
Sylvania Industrial Corp., Channing Bldg., N. Y.

CAPS (Molded)

Anchor Hocking Glass Corp., Lancaster, Ohio
Armstrong Cork Co., Lancaster, Pa.
General Plastics, Inc., N. Tonawanda, N. Y.
Owens-Illinois Glass Co., Toledo, Ohio
Resinox Corp., Terre Haute, Ind.
Toledo Synthetic Prods. Co., Toledo, Ohio

CAPS (Metal)

Aluminum Co. of America, Gulf Bldg., Pittsburgh
Anchor Hocking Glass Corp., Lancaster, Ohio
Aridor Co., 3428 W. 48th Place, Chicago
Armstrong Cork Co., Lancaster, Pa.
Cans, Inc., 3217 W. 47th Pl., Chicago
Closure Service Co., Toledo, Ohio
Continental Can Co., 100 E. 42nd St., N. Y.
Crown Cork & Seal Co., Eastern Ave. & Kresson St.,
Baltimore
George D. Ellis Sons, 309 N. 3rd St., Phila.
National Can Co., 110 E. 42nd St., N. Y.
National Seal Co., 14th Ave. & 37th St., Brooklyn
Owens-Illinois Glass Co., Toledo, Ohio
Phoenix Metal Cap Co., 2444 W. 16th St., Chicago

CARBOLIC ACID, CRUDE (see Phenol)

CARBON for bleaching oils, glycerine, etc. (see Decolorizing Carbons)

CARBON BISULFIDE

(see also Dealers)

J. T. Baker Chem. Co., Phillipsburg, N. J.
Dow Chemical Co., Midland, Mich.
E. I. Du Pont de Nemours & Co., Wilmington, Del.
Merck & Co., Rahway, N. J.
Penna. Salt Mfg. Co., 1000 Widener Bldg., Phila.
Stauffer Chem. Co., 420 Lexington Ave., N. Y.
Westvaco Chlorine Prods., 405 Lexington Ave., N. Y.

CARBON TETRACHLORIDE

(see also Dealers)

J. T. Baker Chemical Co., Phillipsburg, N. J.
Brown Co., Portland, Me.
Diamond Alkali Corp., 535 Smithfield St., Pittsburgh
Dow Chemical Co., Midland, Mich.
E. I. Du Pont de Nemours & Co., Wilmington, Del.
Innis, Speiden & Co., 117 Liberty St., N. Y.

Niagara Smelting Corp., Niagara Falls, N. Y.
Pennsylvania Salt Mfg. Co., 1000 Widener Bldg., Phila.
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Stauffer Chem. Co., 420 Lexington Ave., N. Y.
Jos. Turner & Co., Ridgefield, N. J.
Welch, Holme & Clark Co., 439 West St., N. Y.
Westvaco Chlorine Prods., 405 Lexington Ave., N. Y.

CARNAUBA WAX (see WAXES)

CARTON HANDLING SYSTEMS

J. L. Ferguson Co., Joliet, Ill.
Hornney & Co., 420 Lexington Ave., N. Y.
Pneumatic Scale Corp., Quincy, Mass.
Self-Lifting Piano Truck Co., Findlay, Ohio
Stephans-Adamson Mfg. Co., Aurora, Ill.
Weigh Right Automatic Scale Co., Joliet, Ill.

CARTON LINING MACHINES (see Lining Machinery)

CARTON SEALING MACHINERY (see Sealing Machinery)

CARTONING MACHINERY

Allied Steel & Equipment Co., 1007 Springfield Ave.,
Irvington N. J.
Consolidated Prods. Co., 15 Park Row, N. Y. (Used)
J. L. Ferguson Co., Joliet, Ill.
First Machy. Corp., 157 Hudson St., N. Y. (Used)
Hornney & Co., 420 Lexington Ave., N. Y.
Johnson Automatic Sealer Co., Battle Creek, Mich.
R. A. Jones & Co., Cincinnati, Ohio
Newman Tallow & Soap Machy. Co., 1051 W. 35th St.,
Chicago
Pneumatic Scale Corp., North Quincy, Mass.
F. B. Redington Co., 112 S. Sangamon St., Chicago
A. H. Ross & Co., P. O. Box 998, Dayton, O.
Stein Equipment Corp., 90 West St., N. Y. (Used)
Stokes & Smith Co., 4915 Summerdale Ave., Phila.
Triangle Package Machinery Co., 906 N. Spaulding Ave.,
Chicago
Weigh Right Automatic Scale Co., Joliet, Ill.

CARTONS (Display and Knock Down)

Alderman-Fairchild Co., Rochester, N. Y.
F. N. Burt Co., 540 Seneca St., Buffalo, N. Y.
Consolidated Paper Co., Monroe, Mich.
Robert Gair Co., 155 E. 44th St., N. Y.
Gardner-Richardson Co., Middletown, Ohio
Nevins-Church Co., 250 Park Ave., N. Y.
New England Card & Paper Co., Springfield, Mass.
Pictorial Package Co., Aurora, Ill.
Randolph Box & Label Co., 843 W. VanBuren St., Chicago
W. C. Ritchie & Co., 8855 S. Baltimore Ave., Chicago
Robertson Paper Box Co., Inc., Montville, Conn.
George Schmitt & Co., Grand & Florence Sts., Brooklyn
Sutherland Paper Co., Kalamazoo, Mich.
U. S. Printing & Lithographing Co., Cincinnati, Ohio
Universal Folding Box Co., Monroe & 13th St., Hoboken,
N. J.

CASE SEALING MACHINERY (see Sealing Machinery)

CASEIN

American-British Chem. Supplies, Inc., 180 Madison
Ave., N. Y.
American Cyanamid & Chem. Corp., 30 Rockefeller
Plaza, N. Y.
Casein Co. of America, Div. of The Borden Co., 350
Madison Ave., N. Y.
Wm. Diehl & Co., 336 W. 42nd St., N. Y. 18
E. I. Du Pont de Nemours & Co., Wilmington, Del.
Enco Chem. Corp., 441 Lexington Ave., N. Y.
Hercules Powder Co., Wilmington, Del.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Land-o-Lakes Creameries, Minneapolis
National Casein Co., 603 W. 80th St., Chicago
Sergeant Chem. Co., 7 Dey St., N. Y.
Welch, Holme & Clark Co., 439 West St., N. Y.

CASES (Fibre) (see Boxes, Cans)

CASES (Corrugated) (see Boxes)

CASSIA OIL (see Essential Oils)

CASTILE SOAP, BAR

Armour Soap Wks., 1355 W. 31st St., Chicago
Conti Products Corp., 43 Clinton Ave., Bklyn.
Haskins Bros. & Co., Omaha
Hockwald Chem. Co., 135 Mississippi St., San Francisco
Kranich Soap Co., 54 Richards St., Brooklyn
Lockwood-Brackett Co., Waltham Station, Boston
Los Angeles Soap Co., Los Angeles, Calif.
Newell Gutrad Co., 350 Fremont St., San Francisco
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Procter & Gamble Co., Ivorydale, O.
Sanitary Soap Co., 104 Railroad Ave., Paterson
Schmidt Soap Products, 236 W. North Ave., Chicago
Solshine Mfg. Co., 412 2nd St., Fall River, Mass.
John T. Stanley Co., 642 W. 30th St., N. Y.
Superior Soap Corp., 121 Nostrand Ave., Bklyn.
Swift & Co., Chicago
Allen B. Wrisley Co., 6801 W. 65th St., Chicago

CASTILE SOAP, LIQUID

Ampion Corp., 47-02 5th St., Long Island City, N. Y.
Antiseptol Co., 5524 Northwest Highway, Chicago
Baums Castorine Co., 200 Matthew St., Rome, N. Y.
Chem. Mfg. & Dist. Co., Easton, Pa.
Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
Clifton Chemical Co., 62 William St., N. Y.
Davies-Young Soap Co., Dayton, O.
Eagle Soap Corp., Huntington, Ind.
Fuld Bros., 702 S. Wolfe St., Baltimore
James Good, Inc., Kensington, Phila.
Haag Laboratories, Inc., 140th & Seeley Ave., Blue Island, Ill.
Harley Soap Co., Pierce & Orthodox Sts., Phila.
Higley Chem. Co., Dubuque, Iowa
Hockwald Chem. Co., 135 Mississippi St., San Francisco
R. M. Hollingshead Corp., Camden, N. J.
Hunt Mfg. Co., Lisbon Rd., Cleveland
Hysan Prods. Co., 932 W. 38th Place, Chicago
J. F. Kerns Chem. Prods., 2239 S. Michigan Ave., Chicago
Kranich Soap Co., 54 Richards St., Brooklyn
Lewis Soap & Chem. Co., 2210 San Pablo Ave., Oakland, Calif.
Los Angeles Soap Co., 617 E. 1st St., Los Angeles
Manhattan Kreole Prods., 172 N. 10th St., Brooklyn
Nopco Chemical Co., Harrison, N. J.
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Theo. B. Robertson Prods. Co., 700 W. Division St., Chicago
Sanitary Soap Co., 104 Railroad Ave., Paterson, N. J.
Schmidt Soap Products, 236 W. North Ave., Chicago
John T. Stanley Co., 642 W. 30th St., N. Y.
Tech. Soap Mfg. Co., 125 W. 46th Pl., Chicago
Trio Chem. Wks., 341 Scholes St., Bklyn.
J. A. Tumbler Labs., 423 Hanover St., Baltimore
Superior Soap Corp., 121 Nostrand Ave., Bklyn.
U. S. Sanitary Spec. Corp., 435 S. Western Ave., Chicago
Uncle Sam Chem. Co., 575 W. 131 St., N. Y.
G. H. Wood & Co., Toronto, Ont., Canada
Allen B. Wrisley Co., 6801 W. 65th St., Chicago

CASTOR OIL

(see also Dealers)

Archer-Daniels-Midland Co., Minneapolis
Baker Castor Oil Co., 120 Broadway, N. Y.
Balfour, Guthrie & Co., 67 Wall St., N. Y.
T. G. Cooper & Co., Cedar & Venango Sts., Phila.
Otto A. C. Hagen Co., 929 Public Ledger Bldg., Phila.
Spencer Kellogg & Sons, Buffalo, N. Y.
Pacific Vegetable Oil Corp., 62 Townsend St., San Francisco

J. H. Redding, Inc., 17 Battery Place, N. Y.
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Arthur C. Trask Co., 4103 S. La Salle St., Chicago
Welch, Holme & Clark Co., 439 West St., N. Y.

CATALYSTS

Aluminum Co. of America, Gulf Bldg., Pittsburgh
Attapuligus Clay Co., 210 W. Washington Sq., Phila.
J. T. Baker Chem. Co., Phillipsburg, N. J.
Filtrol Corp., 634 So. Spring St., Los Angeles
Carbide & Carbon Chem. Corp., 30 E. 42nd St., N. Y.
General Chem. Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Harshaw Chem. Co., Cleveland
Hooker Electrochemical Co., Niagara Falls, N. Y.
Johns-Manville Corp., 22 E. 40th St., N. Y.
Oronite Chem. Co., 200 Bush St., San Francisco
Rufert Chem. Co., 420 Lexington Ave., N. Y.
Wurster & Sanger, Inc., 5201 S. Kenwood Ave., Chicago

CATTLE DIPS AND SPRAYS

(see also Sheep Dips)

An-Fo Mfg. Co., 3129 Elmwood Ave., Oakland, Cal.
Ampion Corp., 47-02 5th St., Long Island City, N. Y.
Associated Chemists, Inc., 1906 N. Halsted Ave., Chicago
Baird & McGuire, Holbrook, Mass.
Baums Castorine Co., 200 Mathew St., Rome, N. Y.
California Spray-Chemical Corp., Richmond, Calif.
Cary Mfg. Co., 4917 E. Michigan St., Indianapolis
Chemical Compounding Corp., 262 Huron St., Brooklyn
Chemical Mfg. & Dist. Co., Easton, Pa.
Chemical Supply Co., 2450 Canal Rd., Cleveland
Chem. Service Co. of Balto, Howard & West Sts., Balto.
Chicago Sanitary Prods. Co., 2526 W. Congress St., Chicago
Chipman Chem. Co., Bound Brook, N. J.
Clifton Chemical Co., 62 William St., N. Y.
Corn King Co., Cedar Rapids, Ia.
Davies-Young Soap Co., Dayton, O.
Delta Chem. Co., 4 Payson Ave., N. Y.
Fuld Bros., 702 S. Wolfe St., Baltimore
Geigy Co., 89 Barclay St., N. Y.
James Good, Inc., 2116 E. Susquehanna Ave., Phila.
Goulard & Olena, 140 Liberty St., N. Y.
Haag Laboratories, Inc., Blue Island, Ill.
Harrison Oil Co., 6110 N. 35th St., Milwaukee
Higley Chem. Co., Dubuque, Iowa
Hockwald Chem. Co., 135 Mississippi St., San Francisco
R. M. Hollingshead Corp., Camden, N. J.
James Huggins & Son, 239 Medford St., Malden, Mass.
Hysan Prods. Co., 932 W. 38th Place, Chicago
Hunt Mfg. Co., Lisbon Rd., Cleveland
William E. Jordan & Bros., 2590 Atlantic Ave., Brooklyn
Kemico Mfg. Co., 500 Chancellor Ave., Irvington, N. J.
J. E. Kerns Chem. Prods., 2239 S. Michigan Ave., Chicago
Ketoid Chem. Co., 339 S. Van Deventer, St. Louis
Koppers Co., White Tar Div., Kearney, N. J.
Lakeland Labs., 625 15th Ave. South, Minneapolis
Lorenz Chem. Co., 135 N. 32nd Ave., Omaha
McLaughlin, Gormley, King Co., Minneapolis, Minn.
Michigan Chem. Corp., St. Louis, Mich.
Nopco Chemical Co., Harrison, N. J.
North Coast Soap & Chem. Wks., Seattle, Wash.
Peck's Prod. Co., 610 E. Clarence Ave., St. Louis
Penna. Salt Mfg. Co., Widener Bldg., Phila.
Pumice Corp. of America, Grants, N. M.
Rex Research Corp., Toledo
Theo. B. Robertson Prods. Co., 700 W. Division St., Chicago
St. Lawrence Chem. Co., Ogdensburg, N. Y.
Schaeffer Bros. & Powell Mfg. Co., 102 Barton St., St. Louis
Standard Oil Co. (Calif.), 225 Bush St., San Francisco
Standard Oil Co. (Ohio), Midland Bldg., Cleveland
Stauffer Chemical Co., 420 Lexington Ave., N. Y.
Texas Soap Mfg. Corp., 4905 Calhoun Road, Houston
Texol Chem. Wks., 3 Winter St., Worcester, Mass.
Thompson-Hayward Chem. Co., 2915 Southwest Blvd., Kansas City, Mo.
Tobacco By-Products & Chem. Corp., Louisville, Ky.
Uncle Sam Chem. Co., 575 W. 131st St., N. Y.

CATTLE DIPS and SPRAYS (Contd.)

U. S. Sanitary Spec. Corp., 435 S. Western Ave., Chicago
James Varley & Sons, 1200 Switzer Ave., St. Louis
Universal Chem. Corp., Akron, O.
Velsicol Corp., 120 E. Pearson St., Chicago
Victory Chem. Co., 148 Fairmont Ave., Phila.
T. F. Washburn Co., 2244 Elston Ave., Chicago
Robert C. White Co., Chestnut Hill, Phila.
Whitmire Res. Labs., 339 S. Vandeventer, St. Louis

CATTLE SPRAY BASE (see Petroleum Bases)

CAUSTIC POTASH (see Potash, Caustic)

CAUSTIC SODA

(see also Dealers)

American Cyanamid & Chem. Corp., 30 Rockefeller Plaza, N. Y.
Belle Alkali Co., Belle, W. Va.
Brown Company, Portland, Me.
Champion Fibre Co., Canton, N. C.
Diamond Alkali Co., 535 Smithfield St., Pittsburgh
Dow Chemical Co., Midland, Mich.
E. I. Du Pont de Nemours & Co., Wilmington, Del.
Hooker Electrochemical Co., Niagara Falls, N. Y.
Industrial Chem. Sales Div., West Va. Pulp & Paper Co., 230 Park Ave., N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Kimberley-Clark Paper Co., Neenah, Wis.
Mathieson Chemical Co., 60 E. 42nd St., N. Y.
Merck & Co., Rahway, N. J.
Michigan Electrochemical Co., Menominee, Mich.
Monsanto Chemical Co., 1700 S. 2nd St., St. Louis 4
Niagara Alkali Co., 60 E. 42nd St., N. Y.
Niagara Smelting Corp., Niagara Falls, N. Y.
Oxford Paper Co., White Mountains, N. H.
Pennsylvania Salt Mfg. Co., Widener Bldg., Phila.
Pittsburgh Plate Glass Co., Columbia Chemical Div., Grant Bldg., Pittsburgh

Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Solvay Sales Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Southern Alkali Corp., Corpus Christi, Tex.
Stauffer Chem. Co., 420 Lexington Ave., N. Y.
Jos. Turner & Co., Ridgefield, N. J.
Westvaco Chlorine Prods. Co., 405 Lexington Ave., N. Y.
Welch, Holme & Clark, 439 West St., N. Y.
Wyandotte Chemicals Corp., Michigan Alkali Div., Wyandotte, Mich.

CEDAR LEAF OIL (see Essential Oils)

CEDARWOOD OIL (see Essential Oils)

CERESIN WAX (see Waxes)

CHALK (Calcium Carbonate)

American Cyanamid & Chem. Corp., 30 Rockefeller Plaza, N. Y.
H. J. Baker & Bro., 271 Madison Ave., N. Y.
Binney & Smith Co., 41 E. 42nd St., N. Y.
Charles B. Chrystal Co., 53 Park Pl., N. Y.
Diamond Alkali Co., 535 Smithfield St., Pittsburgh
E. I. Du Pont de Nemours & Co., Wilmington, Del.
Fezandie & Sperrle, 205 Fulton St., N. Y.
E. Fougere & Co., 41 Maiden Lane, N. Y.
Goris & Co., 8124 S. Hoyne Ave., Chicago
K. F. Griffiths Co., 110 E. 42nd St., N. Y.
Hammill & Gillespie, 225 Broadway, N. Y.
Charles Hardy, Inc., 415 Lexington Ave., N. Y.
Industrial Chem. Sales Div., West Va. Pulp & Paper Co., 230 Park Ave., N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
James H. Rhodes & Co., 157 W. Hubbard St., Chicago
L. A. Salomon & Bro., 216 Pearl St., N. Y.
Tamma Silica Co., 228 N. LaSalle St., Chicago
Charles A. Wagner Co., 813 Callowhill St., Phila.
Whittaker, Clark & Daniels, Inc., 260 W. Broadway, New York
Witco Chemical Co., 295 Madison Ave., N. Y.

DRUGS CHEMICALS



OILS WAXES

ARSENIC
CARBON TETRACHLORIDE
CAUSTIC SODA
JAPAN WAX
METHYL SALICYLATE
(Artificial Wintergreen)

NAPHTHALENE
ORTHODICHLORO BENZENE
PARADICHLORO BENZENE
SODA FLUORIDE
SODA SILICO FLUORIDE

ROSENTHAL-BERCOW CO., Inc.

25 EAST 26th ST.

NEW YORK 10, N. Y.

CABLE ADDRESS "RODRUG"



CHEMICAL MANUFACTURING CO. AND DISTRIBUTING EASTON . . . PENNA.



A complete line of SANITATION CHEMICALS

Years of research and the practical experience of our principals and technical staff have developed Target Brand Products for every industrial, institutional and household sanitation use. The large,

modern Target plant at Easton is devoted exclusively to the manufacture of soap and soap products and sanitation chemicals. Rigid laboratory control is maintained over all products to insure uniform high quality.

The products listed below are available under our Target label or private brand labels:

SOAPS

- Scrubbing Soaps
- Liquid Hand Soap
- Soap Powders—7 Grades
- Vegetable Oil Soaps
- Coconut Oil Soaps

DETERGENTS

- Dishwashing Compounds
- Targicides (Detergent-Sanitizers for Dishwashing)
- Gobs-O-Suds
- LoPH Cleaner

GERMICIDE

- Quaternary Ammonium Compound

DISINFECTANTS

- Deodorant Blocks
- Moth and Deodorant Crystals
- Coal Tar Disinfectants
- Pine Oil Disinfectants
- Cresol Solution
- Drip Machine Fluid

OTHER TARGET PRODUCTS

- China Cleen
- Silver Dip
- Liquid Starch
- Drain Pipe Solvent
- Lye

INSECTICIDES

- Cattle Spray
- Fly Spray
- DDT—5% Technical
- DDT—5% Technical with 3% Thanite
- 25% DDT Concentrate (Water Miscible)
- Moth Spray
- Odorless and Perfumed Insecticides
- Roach and Ant Powder

CLEANING COMPOUNDS

- Bowl Cleaner
- Glass Cleaners
- Dairy Cleaners
- All Purpose Cleaner
- Lanolized Hand Cleaner
- Paint Cleaner
- Scouring Cleanser
- Household Cleaner
- Garage Floor Cleaner

POLISHES

- Burnishing Paste
- Cream Furniture Polish
- Metal Polish

WAXES

- Liquid
- Dance Floor
- Paste
- Wax Soap Floor Cleaner

WE SELL ONLY THROUGH JOBBERS



PLANT AT EASTON, PA.



CHAMOIS

Addison Sponge Co., 118 E. Court St., Cincinnati
Allied Industrial Prods. Co., 620 N. Michigan St., Chicago
Amer. Sponge & Chamois Co., 47 Ann St., N. Y.
Atlas Sponge Co., 291 Church St., N. Y.
Churchill Mfg. Co., Galesburg, Ill.
E. I. Du Pont de Nemours & Co., Wilmington, Del.
Great Eastern Sponge & Chamois Co., 833 N. Patt. Pk.
Ave., Baltimore
Jos. Neihaus Co., 341 W. 4th St., Cincinnati
James H. Rhodes & Co., 157 W. Hubbard St., Chicago
Schroeder & Tremayne, 500 N. Coml. St., St. Louis

CHEMICALS, LOCAL DEALERS (see Dealers,
Chemicals)

CHEMISTS, CONSULTING, (See Consultants, See Labora-
tories, Testing)

CHILLING ROLLS

Consolidated Prods. Co., 15 Park Row, N. Y. (Used)
First Machy. Corp., 157 Hudson St., N. Y. (Used)
William Garrigue & Co., 9 S. Clinton St., Chicago
Houchin Machy. Co., Hawthorne, N. J.
Huber Machine Co., 259—46th St., Brooklyn
J. M. Lehmann Co., Lyndhurst, N. J.
Newman Tallow & Soap Machy. Co., 1051 W. 35th St.,
Chicago (Used)
Proctor & Schwartz, 7th St. & Tabor Rd., Philadelphia
C. G. Sargent's Sons Corp., Graniteville, Mass.
Stein Equipment Co., 90 West St., N. Y. (Used)
F. J. Stokes Machine Co., 5974 E. Tabor Rd., Phila.
Wurster & Sanger, Inc., 5201 S. Kenwood Ave., Chicago

CHIPPERS (see Soap Machinery)

CHIP SOAPS (including Flakes)

Aid Soap Mfg. Co., 1962 Enoch St., Pittsburgh, Pa.
American Soap & Washoline Co., Cohoes, N. Y.
Armour Soap Co., 1355 W. 31st St., Chicago
Beach Soap Co., Lawrence, Mass.
Chem. Mfg. & Dist. Co., Easton, Pa.
Chicago Sanitary Products Co., 3100 S. Throop St.,
Chicago
Colgate-Palmolive-Peet Co., Jersey City, N. J.
Du Bois Soap Co., Cincinnati, Ohio
J. Eavenson & Sons, Camden, N. J.
Haskins Bros. & Co., Omaha
Hewitt Soap Co., Dayton, Ohio
R. M. Hollingshead Corp., Camden, N. J.
Los Angeles Soap Co., Los Angeles, Calif.
Geo. E. Marsh Co., 200 Broadway, Cambridge, Mass.
National Milling & Chem. Co., Manayunk, Phila.
Nopec Chemical Co., Harrison, N. J.
National Soap Co., 357 South 25th St., Tacoma, Wash.
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Procter & Gamble Co., Cincinnati
Sanitary Soap Co., 104 Railroad Ave., Paterson, N. J.
Schmidt Soap Products, 236 W. North Ave., Chicago, Ill.
John T. Stanley Co., 642 W. 30th St., N. Y.
Swift & Co., Chicago
Texas Soap Mfg. Corp., 4905 Calhoun Rd., Houston
Warren Soap Mfg. Co., 51 Warren St., Cambridge, Mass.
M. Werk Co., Cincinnati
Chas. W. Young & Co., 1247 N. 26th St., Phila.

CHLORDANE

Julius Hyman & Co., Denver, Colo.
Velsicol Corp., 330 E. Grand Ave., Chicago

CHLORIDE OF LIME (see Bleaching Powder)

CHLORINE

American Cyanamid & Chem. Corp., 30 Rockefeller
Plaza, N. Y.
Diamond Alkali Co., 535 Smithfield St., Pittsburgh

1948 BLUE BOOK



A SOURCE OF SATISFACTION

TRADE MARK

for soaps of highest efficacy to insure genuine
profits and contented customers

PURE, STRAIGHT, NEUTRAL SOAPS— 41/42 TITRE

88/92%—KAMENOL 92—Thin, Crisp, Flakes

88/92%—KAMENOL M—Powdered

BUILT SOAP — HIGH TITRE

53/60%—KAMENOL 60—Powder, Spray Dried

SOAP POWDERS

22/25%—KAME-N-KLEEN 25 (All Purpose)

15/18%—KAME-N-KLEEN 18 (General Duty
Cleaning)

8/10%—KAME-N-KLEEN 10 (Heavy Duty
Scrubbing)

LAUNDRY SOAP BARS

Yellow Brown or Blue Mottled — All Sizes

PUMICE HAND SOAP BARS (COCONUT OIL BASE)

3/4 oz. and 5 oz. sizes

PURE VEGETABLE OIL SOAPS 92%—LOW TITRE—POWDERED

MILLED TOILET SOAP BARS

SYNTHETIC DETERGENTS

ALKYL ARYL SULFONATES SULFONATED GLYCERIDE

ALSO: CRUDE GLYCERINE—88%

(Powdered Soaps Available in Packages Of
8, 16, 20 and 40 oz.)
Private Brand Packaging Solicited

KAMEN SOAP PRODUCTS CO., Inc.

Woolworth Building
New York 7, N. Y.

FACTORY: BARBERTON, OHIO—the MOST MODERN, BEST EQUIPPED
SOAP PLANT IN AMERICA—ADVANTAGEOUSLY LOCATED FOR
DEPENDABLY QUICK DELIVERIES ANYWHERE

ATTACLAY

a carrier and diluent
to *better* serve your
dust needs

Here are its characteristics:

● Attaclay has earned a firm place in many dust formulas. Its fine service to users, its widespread acceptance all add up to a simple truth—it will pay *you* to test Attaclay.

MINERALOGICAL SOURCE Attapulgit, an aluminum magnesium silicate.

COLOR Light grey cream.

HARDNESS Non-abrasive. Does not induce abnormal wear on manufacturing or applying equipment.

BULK DENSITY 27-31 lbs./cu.ft.

FINENESS 85% through 325 mesh. 1-2 microns (surface mean diameter, by air permeation method).

PARTICLE SHAPE Spicular.

pH Neutral.

ADSORPTIVITY Permits making highest-percentage concentrates or finished dusts with chlorinated camphene, benzene hexachloride, chlordane, DDT, etc. Simplifies superfine grinding or mixing.

WETTABILITY Attaclay has inherent wetting action on "hard-to-wet" toxicants.

SUSPENDABILITY Within the required range. Readily modified to meet specific formula needs.

FLOWABILITY Attaclay's freedom from caking and lumping means ease of handling. It insures trouble-free flow through processing and dispersing equipment.

DUSTABILITY Excellent characteristics as regards carrying power, even coverage ability, tenacity.

COMPATIBILITY Attaclay's high degree of chemical compatibility is well-established.

USES Insecticide or fungicide dust bases, wettable powders and finished dusts. Herbicides and plant hormone dusts. Carrier for impregnated liquid toxicants.

Write for a generous sample today. Mined and processed by

ATTAPULGUS CLAY COMPANY

210 WEST WASHINGTON SQUARE, PHILADELPHIA 5, PA.

CHLORINE (Contd.)

E. I. Du Pont de Nemours Co., Wilmington, Del.
Hercules Powder Co., Wilmington, Del.
Hooker Electrochemical Co., Niagara Falls, N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Mathieson Chemical Co., 60 E. 42nd St., N. Y.
Monsanto Chemical Co., 1700 S. 2nd St., St. Louis
Niagara Alkali Co., 60 E. 42nd St., N. Y.
Pennsylvania Salt Mfg. Co., Widener Bldg., Phila.
Pittsburgh Plate Glass Co., Columbia Chemical Div.,
Grant Bldg., Pittsburgh
Solvay Sales Div., Allied Chem. & Dye Corp., 40 Rector
St., N. Y.
Stauffer Chem. Co., 420 Lexington Ave., N. Y.
Jos. Turner & Co., Ridgefield, N. J.
Universal Chlorinator Co., 3418 W. Pico Blvd., Los
Angeles
Westvaco Chlorine Prods. Co., 405 Lexington Ave., N. Y.
Wyandotte Chemicals Corp., Michigan Alkali Div.,
Wyandotte, Mich.

CHLORINE DISINFECTANTS (see Disinfectants)

CHLOROFORM

J. T. Baker Chem. Co., Phillipsburg, N. J.
Brown Company, Portland, Me.
Dow Chemical Co., Midland, Mich.
E. I. Du Pont de Nemours & Co., Wilmington, Del.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Malinckrodt Chemical Works, St. Louis, Mo.
Merck & Co., Rahway, N. J.
Niagara Smelting Corp., Niagara Falls, N. Y.
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Stauffer Chem. Co., 420 Lexington Ave., N. Y.

CHLOROPHYLL (see also Essential Oils)

A. C. Drury & Co., 219 E. North Water St., Chicago
R. W. Greeff & Co., 10 Rockefeller Plaza, N. Y.
Harshaw Chemical Co., 1945 E. 97th St., Cleveland
Interstate Color Co., 5 Beekman St., N. Y.
Magnus, Mabey & Reynard, 16 Desbrosses St., N. Y.
Merck & Co., Rahway, N. J.
S. B. Penick & Co., 50 Church St., N. Y.
R. J. Prentiss & Co., 110 William St., N. Y.
Pylam Products Co., 799 Greenwich St., N. Y.
Sandoz Chem. Works, Inc., 61 Van Dam St., N. Y.
Schimmel & Co., 601 W. 26th St., N. Y.

CITRAL (see Aromatic Chemicals)

CITRONELLAL (see Aromatic Chemicals)

CITRONELLA OIL (see Essential Oils)

CITRONNELLOL (see Aromatic Chemicals)

CLAYS

(see also Bleaching Earths)

American Colloid Co., 363 W. Superior St., Chicago
American Cyanamid & Chem. Corp., 30 Rockefeller
Plaza, N. Y.
Atlantic Refining Co., 260 S. Broad St., Phila.
Attapulugus Clay Co., 210 W. Washington Sq., Phila.
California Industrial Minerals Co., Friant, Calif.
Charles B. Chrystal Co., 53 Park Pl., N. Y.
Dicalite Co., 120 Wall St., N. Y.
Fezandie & Sperrle, 205 Fulton St., N. Y.
Filtrol Corp., 634 S. Spring St., Los Angeles
Floridin Co., 220 Liberty St., Warren, Pa.
Goris & Co., 8124 S. Hoyne Ave., Chicago
Hammill & Gillespie, 225 Broadway, N. Y.
Hercules Powder Co., Wilmington, Del.
J. M. Huber, Inc., 620 62nd St., Brooklyn
Illinois Silica Co., Cairo, Ill.
Industrial Chem. Sales Div., West Va. Pulp & Paper Co.,
230 Park Ave., N. Y.



The Indians and Hudson Bay traders of the North-west washed their blankets with a peculiar clay found in that region. They called it "soap clay" or "mineral jelly." There was truth in their discovery of its crude, practical efficiency! This colloidal clay is now known to be bentonite; we refine it into VOLCLAY for use in washing and cleaning compounds.

VOLCLAY is not just a "filler." It has actual detergent properties, which become very useful when combined with other ingredients

VOLCLAY is produced in air-floated powders, some impalpably fine. Also as "KWK" — a pellet form that astonishingly disperses in water very quickly and yet yields the same colloidal gels as fine powder.

- Emulsifies oil, greasy soil and bitumens
- Absorbs and suspends soil particles
- Absorbs certain proteins, also carbon
- Mild. The pH is 9 to 9.5
- Slightly zeolitic—absorbs calcium, gives up sodium ions

Write us today for literature

**AMERICAN COLLOID
COMPANY**

**363 WEST SUPERIOR STREET
CHICAGO 10, ILLINOIS**

It was in 1865...



. . . in the postwar period following the Civil War we made the first Stanley Soap. Today, private brand or otherwise, your problem as a soap jobber or buyer is primarily to service your accounts with Supreme Quality Soaps at the best possible prices.

Your customers deserve this consideration. The skill and experience that accrues in more than three-quarters of a century of soapmaking can give you confidence in Stanley's Soap. Your requirements, no matter how large or how small, are produced with the same high standard of impeccable perfection. Let your next inquiry prove our claim.

PRIVATE BRANDS

LAUNDRY SOAPS

SCOURING POWDERS

LIQUID CLEANERS

TOILET SOAPS

SCOURING SOAPS

SHAMPOOS

SHAVING SOAPS

POTASH SOAPS

CHEMICAL CLEANERS

Master Soapmakers Since 1865

JOHN T. STANLEY COMPANY, Inc.

626-662 W. 30th STREET

NEW YORK, N. Y.

CLAYS (Contd.)

Innis, Speiden & Co., 117 Liberty St., N. Y.
 International Silica Co., Cairo, Ill.
 Natura Minerals Co., 108 W. 6th St., Los Angeles
 National Sales Corp., 33 E. 13th St., Cincinnati
 Owyhee Chemical Products Co., 300 W. Adams St., Chicago
 Peerless Clay & Mineral Co., Pueblo, Colo.
 L. A. Salomon & Bro., 216 Pearl St., N. Y.
 F. E. Schundler & Co., Joliet, Ill.
 Sinclair Refining Co., East Chicago, Ind.
 Standard Oil Co. (Ind.), 910 S. Michigan Ave., Chicago
 A. E. Starkie Co., 5461 W. Division St., Chicago
 Tamms Silica Co., 228 N. LaSalle St., Chicago
 United Clay Mines Corp., 101 Oakland St., Trenton, N. J.
 R. T. Vanderbilt Co., 230 Park Ave., N. Y.
 Chas. A. Wagner Co., 813 Callowhill St., Phila.
 Whittaker, Clark & Daniels, 260 W. Broadway, N. Y.
 Witco Chemical Co., 295 Madison Ave., N. Y.
 Wyodak Chem. Co., 4600 E. 71st St., Cleveland

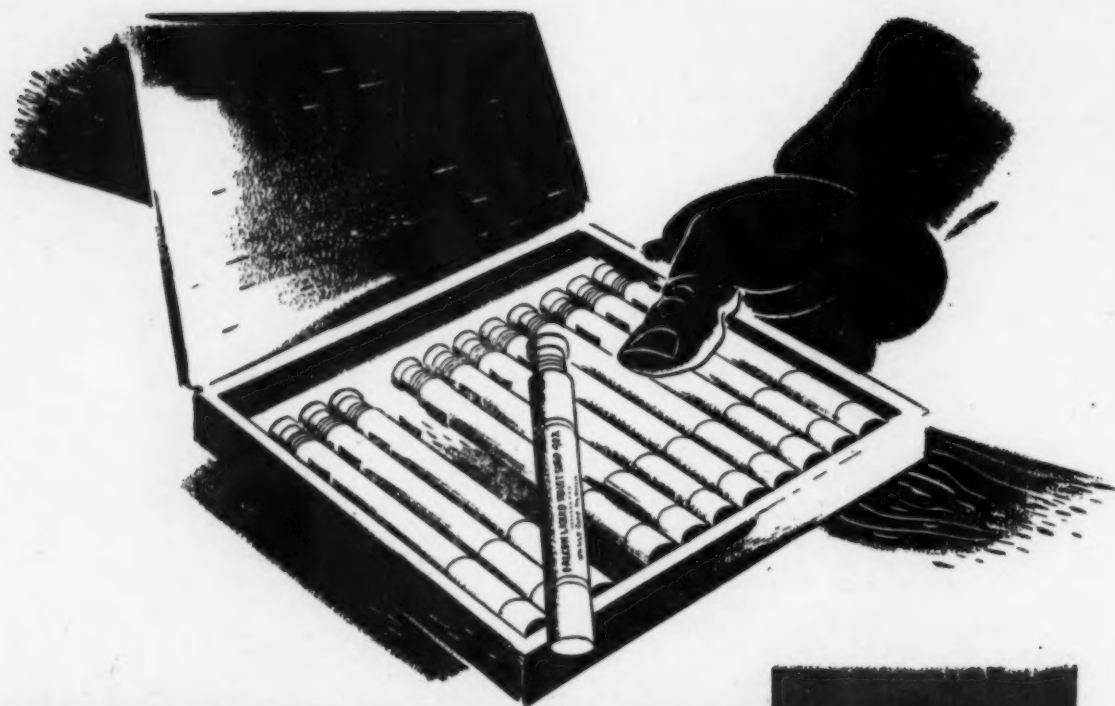
CLEANERS, LIQUID (see also Floor Scrub Soaps, also Cleaning Fluids)

Alrose Chem. Co., Box 1294, Providence, R. I.
 American Chemical Paint Co., Ambler, Pa.
 American Soap & Washoline Co., Cohoes, N. Y.
 Ampion Corp., 47-02 5th St., Long Island City, N. Y.
 An-Fo Mfg. Co., 3129 Elmwood Ave., Oakland, Calif.
 Antiseptol Co., 5524 Northwest Highway, Chicago
 Armour & Co., 1355 W. 31st, Chicago
 Baird & McGuire, Inc., Holbrook, Mass.
 Banner Chem. Prods. Co., 60 Elm St., Newark, N. J.
 Baums Castorine Co., 200 Mathew St., Rome, N. Y.
 Barton Chemical Co., 3907 S. Langley Ave., Chicago
 Boston Chemical Industries, 64 E. Brookline St., Boston
 Bri-Test Prods. Corp., 845 E. 138th St., N. Y.
 Buckingham Wax Co., 51-03 Van Dam St., L. I. City, N. Y.
 Cenol Co., 4250 N. Pulaski Ave., Chicago
 Chemical Compounding Corp., 262 Huron St., Brooklyn
 Chemical Mfg. & Dist. Co., Easton, Pa.
 Chemical Service Co., Baltimore 30, Md.
 Chemical Supply Co., Plymouth Bldg., Cleveland
 Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
 Churchill Mfg. Co., Galesburg, Ill.
 Clifton Chemical Co., 62 William St., N. Y.
 Cole Laboratories, 22-19 37th Ave., L. I. City, N. Y.
 Crystal Soap & Chem. Co., 6300 State Rd., Philadelphia
 Curran Corp., Lawrence, Mass.
 Davies-Young Soap Co., Dayton, Ohio
 Delta Chemical Co., 4 Payson Ave., N. Y.
 Diversey Corp., 53 W. Jackson Blvd., Chicago
 Eagle Soap Corp., Huntington, Ind.
 Emulsol Corp., 59 E. Madison St., Chicago
 Fairfield Labs., Inc., 417 Cleveland Ave., Plainfield, N. J.
 Franklin Research Co., 5134 Lancaster Ave., Phila., Pa.
 Fuld Bros., 702 So. Wolfe St., Baltimore
 Gaylord Chem. Co., 701 Woodswether Rd., Kansas City
 Gleamite Co., Coudersport, Pa.
 James Good, Inc., 2116 E. Susquehanna Ave., Phila.
 Haag Laboratories, Inc., 140th & Seeley Ave., Blue Island, Ill.
 Harley Soap Co., Pierce & Orthodox Sts., Phila.
 Hercules Chem. Co., 332 Canal St., N. Y.
 Higley Chemical Co., Dubuque, Iowa
 Hockwald Chem. Co., 135 Mississippi St., San Francisco, Cal.
 R. M. Hollingshead Corp., Camden, N. J.
 Hubman Supply Co., 225 N. 4th St., Columbus, Ohio
 James Huggins & Son, Malden, Mass.
 Hull Co., 305 Washington St., Brooklyn
 Hysan Prods. Co., 932 W. 38th Place, Chicago
 Imperial Prods. Co., 1600 Fountain St., Phila.
 Industrial Chem. Prods. Co., Comm. Trust Bldg., Phila.
 J. F. Kerns Chem. Prods., 2239 S. Michigan Ave., Chicago
 Klix Chem. Co., 2460 Third St., San Francisco
 Kopners Co., White Tar Div., Kearney, N. J.
 La Maison Prods., Inc., 80 York St., Brooklyn
 Lewis Soap & Chem. Co., 2210 San Pablo Ave., Oakland, Calif.

Los Angeles Soap Co., 617 E. 1st St., Los Angeles
 M. & H. Laboratories, 2703 Archer Ave., Chicago
 Manhattan Kreole Prods., 172 N. 10 St., Brooklyn
 M. Michel & Co., 90 Broad St., N. Y.
 Midland Labs., Dubuque, Iowa
 Miranol Chem. Co., P.O. Box 118, Milltown, N. J.
 Multi-Clean Prods., Inc., 2277 Ford P'kway, St. Paul, Minn.
 Mutual Chem. & Supply Co., 257 W. Gay St., Columbus, Ohio
 Nopeco Chemical Co., Harrison, N. J.
 Oil-Kraft, Inc., 3330 Beekman St., Cincinnati
 Oronite Chemical Co., 200 Bush St., San Francisco
 Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
 Pennsylvania Refining Co., Butler, Pa.
 Penna. Salt Mfg. Co., Widener Bldg., Phila.
 Puritan Chem. Co., Atlanta, Ga.
 Rex-Cleanwall Corp., Brazil, Ind.
 R. G. A. Laboratories, 145 W. 45th St., N. Y.
 Richard's Sales Corp., Warren & Morris Sts., Jersey City, N. J.
 Theo. B. Robertson Prods. Co., 700 W. Division St., Chicago
 Rochester Sanitary Prods. Co., 874 Seward St., Rochester, N. Y.
 Rohm & Haas Co., 222 W. Washington Sq., Philadelphia
 Sanitary Soap Co., 104 Railroad Ave., Paterson, N. J.
 Seaboard Distributors, 60 Park Pl., Newark, N. J.
 Skotch Prods. Corp., 2710 Detroit Ave., Cleveland
 Slick-Shine Co., 207 Astor St., Newark, N. J.
 E. B. Snyder Labs., 2137 E. Harold St., Philadelphia
 Solshine Mfg. Co., 423 Second St., Fall River, Mass.
 L. Sonneborn Sons, 88 Lexington Av., N. Y.
 John T. Stanley Co., 642 W. 30th St., N. Y.
 S. S. Stafford, Inc., 603 Washington St., N. Y.
 Tech. Soap Co., 125 W. 46th Place, Chicago
 Texas Soap Mfg. Corp., 4905 Calhoun Rd., Houston
 Texol Chem. Wks., 3 Winter St., Worcester, Mass.
 Thompson-Hayward Chem. Co., 2915 Southwest Blvd., Kansas City, Mo.
 Transmotive Laboratories, 2550 S. Michigan Ave., Chicago
 Trio Chem. Wks., 341 Scholes St., Bklyn.
 Twi-LaQ Chem. Co., 25 N. Portland Ave., Bklyn.
 J. A. Tumbler Labs., 423 Hanover St., Baltimore
 Ultra Chem. Wks., Box 1536, Paterson, N. J.
 Uncle Sam Chemical Co., 573 W. 131st St., New York City
 U. S. Sanitary Spec. Corp., 435 So. Western Ave., Chicago
 Universal Chem. Corp., Akron, O.
 James Varley & Sons, 1200 Switzer Ave., St. Louis
 Victory Soap & Chem. Co., 252-58 Third St., Bklyn.
 Windsor Wax Co., 611 Newark St., Hoboken, N. J.
 Welch, Holme & Clark Co., 439 West St., N. Y.
 G. H. Wood & Co., Toronto, Canada
 Wilco Co., 6800 McKinley Ave., Los Angeles

CLEANING COMPOUNDS, DRY

Alrose Chem. Co., Box 1294, Providence, R. I.
 American Soap & Washoline Co., Cohoes, N. Y.
 American Chemical Paint Co., Ambler, Pa.
 Ampion Corp., 47-02 5th St., Long Island City, N. Y.
 Antara Prods. Div., Gen. Aniline & Film Corp., 444 Madison Ave., N. Y.
 Armour & Co., 1355 W. 31st St., Chicago
 Axton-Cross Co., Cheshire, Conn.
 Barton Chemical Co., 3907 S. Langley Ave., Chicago
 Baums Castorine Co., 200 Mathew St., Rome, N. Y.
 Beach Soap Co., Lawrence, Mass.
 Blockson Chemical Co., Joliet, Ill.
 Bonewitz Chemicals, Inc., Burlington, Ia.
 Brilco Laboratories, 947-61st St., Brooklyn, N. Y.
 Cary Mfg. Co., 4917 E. Michigan St., Indianapolis
 California Industrial Minerals Co., Friant, Calif.
 Philip Carey Mfg. Co., Lockland, Cincinnati
 Chemical Mfg. & Dist. Co., Easton, Pa.
 Chem. Service Co. of Balto., Howard & Fast Sts., Balto.
 Chemical Supply Co., Plymouth Bldg., Cleveland
 Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
 Clifton Chem. Co., 62 William St., N. Y.
 Cole Labs., 22-19—37th Ave., Long Island City
 Columbia Soap & Chem. Co., Inc., 217-221 Clara St., San Francisco
 Cowles Detergent Co., Cleveland, Ohio



28 GOOD REASONS

..for carrying the Falcon Line

YOU CAN make more profitable sales easier, and build a steady repeat business, if you carry the Falcon Line of Sanitation Products. There's a Falcon product to meet every sanitation need . . . dependable, made under laboratory control, and favorably known wherever you go. Investigate our proposition now. Write today for complete information.

FALCON SANITATION PRODUCTS

LIQUID TOILET SOAPS

Falcon 18% Mechanics Grade
Falcon Coconut Oil Shampoo
Falcon 40% Concentrated
Falcon 18% Toilet Grade

DEODORANTS

Falcon Blockettes
Falcon Crystals
Falcon Blocs

PLUMBING CLEANSERS

Falcon Powdered Bowl Cleaner
Falcon Porcelain Cleaner
Falcon Drain Opener

DISINFECTANTS

Falcon Colloidal Disinfectant
Falcon Formaldehyde Spray
Falcon Pine Disinfectant

FALCON CLEANSERS

Falcon Commercial Green Soap
Falcon Economy Scrub Soap
Falcon Liquid Terrazzo Soap
Falcon Liquid Linseed Soap
Vegetable Oil Jelly Soap
Falcon Cleaning Crystals

FLOOR DRESSINGS

Falcon Non-Buffing Wax
Falcon Liquid Floor Wax
Falcon Floor Varnish
Falcon Floor Seal

INSECTICIDES

Falcon Bed Bug Killers
Falcon Roach Powder
Falcon Moth Killer
Falcon Fly Killer
Falcon Warehouse and Mill Insecticide

EAGLE SOAP CORPORATION • HUNTINGTON, INDIANA

CLEANING COMPOUNDS, DRY (Contd.)

Crystal Labs., Inc., 21 W. Park Way, N. E., Pittsburgh
 Crystal Soap & Chem. Co., 6300 State Rd., Philadelphia
 Cudahy Packing Co., 221 N. LaSalle St., Chicago
 Davies-Young Soap Co., Dayton, O.
 Delta Chemical Co., 4 Payson Ave., N. Y.
 Diamond Alkali Co., Standard Silicate Div., 535 Smithfield St., Pittsburgh
 Diversey Corp., 53 W. Jackson Blvd., Chicago
 Eagle Soap Corp., Huntington, Ind.
 Emeryville Chem. Co., 405 Montgomery St., San Francisco
 Emulsol Corp., 59 E. Madison St., Chicago
 Fairfield Labs., Inc., 417 Cleveland Ave., Plainfield, N. J.
 Filtrol Corp., 634 S. Spring St., Los Angeles
 Fuld Bros., 702 S. Wolfe St., Baltimore
 Gaskill Products, 9 S. Letitia St., Phila.
 Gaylord Chem. Co., 505 W. 5th St., Kansas City, Mo.
 James Good, Inc., 2116 E. Susquehanna Ave., Phila.
 Goulard & Olena, Inc., 140 Liberty St., N. Y.
 Haeuser Shellac Co., 52 Warren St., Brooklyn, N. Y.
 Hercules Chem. Co., 332 Canal St., New York
 Higley Chemical Co., Dubuque, Iowa
 Hockwald Chem. Co., 135 Mississippi St., San Francisco
 Arnold Hoffman Co., Providence, R. I.
 R. M. Hollingshead Corp., Camden, N. J.
 Hubman Supply Co., 225 N. 4th St., Columbus, O.
 Hunt Mfg. Co., Lisbon Rd., Cleveland
 Hysan Prods. Co., 932 W. 38th Place, Chicago
 Imperial Products Co., 1600 Fountain St., Phila.
 Industrial Chem. Prods. Co., Comm. Trust Bldg., Phila.
 J. Chemical Works, 602 W. 37th St., N. Y.
 J. F. Kerns Chem. Prods., 2239 S. Michigan Ave., Chicago
 Klux Chem. Co., 2460 Third St., San Francisco
 H. Kohnstamm & Co., 91 Park Pl., N. Y.
 J. S. Lawston Co., 8 Henshaw St., N. Y.
 Lewis Soap & Chem. Co., 2210 San Pablo Ave., Oakland, Calif.
 Los Angeles Soap Co., Los Angeles, Calif.
 M. & H. Laboratories, 2703 Archer Ave., Chicago
 Mackenzie Laboratories, Front & Yarnall St., Chester, Pa.
 Mathieson Alkali Works, 60 E. 42nd St., N. Y.
 M. Michel & Co., 90 Broad St., N. Y.
 Midland Labs., Dubuque, Iowa
 Midway Chemical Co., 5235 W. 65th St., Chicago
 Miranol Chemical Co., P. O. Box 118, Milltown, N. J.
 Mutual Chem. & Supply Co., 257 W. Gay St., Columbus, Ohio
 Napthole, Inc., 15 E. 26th St., New York
 Nat'l Milling & Chem. Co., Manayunk, Phila.
 Nopco Chemical Co., Harrison, N. J.
 National Soap Co., 357 South 25th St., Tacoma, Wash.
 North Coast Soap & Chem. Wks., Seattle, Wash.
 Oronite Chemical Co., 200 Bush St., San Francisco
 Pacific Chem. Co., 1421 N. Main St., Los Angeles
 Peck's Prod. Co., 610 E. Clarence Ave., St. Louis
 Penna. Salt Mfg. Co., 1000 Widener Bldg., Phila.
 Philadelphia Quartz Co., 125 S. 3rd St., Phila.
 Phipps Products Co., 30 Huntington Ave., Boston
 Pittsburgh Plate Glass Co., Columbia Chem. Div., Grant Bldg., Pittsburgh
 Port Huron Detergent Co., Port Huron, Mich.
 Puritan Chem. Co., Atlanta, Ga.
 Rex-Cleanwall Corp., Brazil, Ind.
 R. G. A. Laboratories, 145 W. 45th St., N. Y.
 Richards Chem. Wks., Warren & Morris Sts., Jersey City, N. J.
 Riverside Chem. Co., N. Tonawanda, N. Y.
 Theo. B. Robertson Prods. Co., 700 W. Division St., Chicago
 Rulon Laboratories, Bryant Bldg., Kansas City
 Rumford Chem. Wks., Rumford, R. I.
 Sanitary Soap Co., 104 Railroad Ave., Paterson, N. J.
 Seaboard Distributors, 60 Park Pl., Newark, N. J.
 Skotch Products Corp., 2710 Detroit Ave., Cleveland
 Slick-Shine Co., 207 Astor St., Newark, N. J.
 E. B. Snyder Labs., 2137 E. Harold St., Philadelphia
 Solshine Mfg. Co., 44 Brookline St., Boston
 Solvay Sales Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
 S. & S. Soap Co., 324 Barretto St., Bronx, N. Y.
 John T. Stanley Co., 643 W. 30th St., N. Y.
 Stauffer Chem. Co., 420 Lexington Ave., N. Y.

SOAP

In All Its Forms For

Jobbers and Repackers

Bulk or Packaged

- SOAP FLAKES
- POWDERED SOAP
- MILLED TOILET SOAP
- LIQUID SOAP
- POTASH GREEN SOAP
- HOTEL BAR SOAP—ALL SIZES
- SPECIAL CLEANERS—To your Spec.
- CASTILE SOAP—

Powdered, Liquid, Bars

In ever increasing numbers jobbers and buyers of soaps to be packed under their own label are turning to us for their requirements. Our policy of quality products at a fair price plus speedy service can help you too. Let us know of your needs.

CHICAGO SANITARY
 PRODUCTS COMPANY

3100 S. THROOP STREET
 CHICAGO 8, ILLINOIS

Reilly

Coal Tar Chemicals for the Soap and Disinfectant Industries

CRESOLS

U.S.P., Meta Para, Ortho, and special fractions. To all specifications.

CRESYLIC ACIDS

The entire range—in standard grades or to buyer's specifications.

TAR ACID OILS

In all grades, from 10% to 75% tar acid content, or of specified phenol coefficient, carefully blended.

NAPHTHALENE

Crude (70° C to 78.5° C melting point) and refined white Naphthalene melting above 79° C. In chipped, crystal, flake and powdered form.

XYLENOLS

5-7° range, 5° range, symmetrical—m. p. +58° C

Your inquiries on any of these products or other coal tar chemicals will have prompt attention.

REILLY TAR & CHEMICAL CORPORATION
Merchants Bank Bldg., Indianapolis 4, Indiana
500 Fifth Avenue, New York 18, New York
2513 S. Damen Avenue, Chicago 8, Illinois

Reilly Coal Tar Chemicals for Industry

CLEANING COMPOUNDS, DRY (Contd.)

Stevens Soap Corp., 200 Sullivan St., Brooklyn
 John Sunshine Chem. Co., 604 W. Lake St., Chicago
 Tesco Chem. Co., P. O. Box 4748, Atlanta.
 Texas Soap Mfg. Corp., 4905 Calhoun Rd., Houston
 Thompson-Hayward Chem. Co., 2915 Southwest Blvd.,
 Kansas City, Mo.
 Trio Chem. Wks., 341 Scholes St., Bklyn.
 J. A. Tumbler Labs., 423 Hanover St., Baltimore
 Ultra Chem. Wks., Box 1536, Paterson, N. J.
 Uncle Sam Chem. Co., 573 W. 131st St., N. Y.
 United Cleanser Mfg. Co., Cambridge, Mass.
 U. S. Sanitary Spec. Corp., 435 S. Western Ave., Chicago
 Universal Chlorinator Co., 3418 W. Pico Blvd., Los
 Angeles
 Universal Chem. Corp., Akron, O.
 James Varley & Sons, 1200 Switzer Ave., St. Louis
 Warren Soap Mfg. Co., 51 Waverly St., Cambridge, Mass.
 Warwick Chemical Co., West Warwick, R. I.
 Welch, Holme & Clark Co., 439 West St., N. Y.
 G. H. Wood & Co., Toronto, Canada
 Wyandotte Chem. Corp., Wyandotte, Mich.
 York Chemical Co., 23 Dean St., Bklyn.

CLEANING FLUIDS (Spotting Fluids)

Ampion Corp., 4-88—47th Ave., Long Island City, N. Y.
 An-Fo Mfg. Co., 3129 Elmwood Ave., Oakland, Calif.
 Armour & Co., 1355 W. 31st St., Chicago
 Atlantic Refining Co., 260 South Broad St., Phila.
 Baums Castorine Co., 200 Mathew St., Rome, N. Y.
 Bri-Test Prods. Corp., 845 E. 138th St., N. Y.
 Chem. Service Co. of Balto., Howard & West Sts., Balto.
 Chemical Supply Co., Plymouth Bldg., Cleveland
 Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
 Clifton Chem. Co., 62 William St., N. Y.
 Cole Labs., 22-19 37th Ave., L. I. City, N. Y.
 Curran Corp., Lawrence, Mass.
 Davies-Young Soap Co., Dayton, O.
 Delta Chemical Co., 4 Payson Ave., N. Y.
 E. I. du Pont de Nemours & Co., Wilmington, Del.
 Eagle Soap Corp., Huntington, Ind.
 Elkay Products Corp., 323 W. 16th St., N. Y.
 Emulsol Corp., 59 E. Madison St., Chicago
 Fairfield Labs., Inc., 417 Cleveland Ave., Plainfield,
 N. J.
 Fuld Bros., 702 S. Wolfe St., Baltimore
 James Good, Inc., 2116 E. Susquehanna Ave., Phila.
 Higley Chem. Co., Dubuque, Iowa
 Arnold Hoffman Co., Providence, R. I.
 R. M. Hollingshead Corp., Camden, N. J.
 Hubman Supply Co., 225 N. 4th St., Columbus, O.
 James Huggins & Son, Malden, Mass.
 Hysan Prods. Co., 932 W. 38th Place, Chicago
 Imperial Prods. Co., 1600 Fountain St., Phila.
 J. F. Kerns Chem. Prods., 2239 S. Michigan Ave.,
 Chicago
 Koppers Co., White Tar Div., Kearny, N. J.
 La Maison Prods. Inc., 80 York St., Brooklyn, N. Y.
 Manhattan Kreole Prods., 172 S. 10th St., Brooklyn
 McKesson & Robbins, Bridgeport, Conn.
 Merck & Co., Rahway, N. J.
 Midway Chemical Co., 5235 W. 65th St., Chicago
 Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
 Pennsylvania Refining Co., Butler, Pa.
 Penna. Salt Mfg. Co., Widener Bldg., Phila.
 Skotch Prods. Corp., 2710 Detroit Ave., Cleveland
 Slick-Shine Co., 207 Astor St., Newark, N. J.
 Standard Oil Co. (Calif.), 225 Bush St., San Francisco
 Standard Oil Co. (Ind.), 910 S. Michigan Ave., Chicago
 R. R. Street & Co., 561 W. Monroe St., Chicago
 Tesco Chem. Co., P. O. Box 4748, Atlanta
 Texol Chem. Wks., 3 Winter St., Worcester, Mass.
 Transmotive Laboratories, 2550 S. Michigan Ave.,
 Chicago
 Trio Chem. Wks., 341 Scholes St., Bklyn.
 Trojan Prods. & Mfg. Co., 3107 S. Wabash Ave., Chicago
 J. A. Tumbler Labs., 423 Hanover St., Baltimore
 Ultra Chem. Wks., 2 Wood St., Paterson, N. J.
 Uncle Sam Chem. Co., 573 W. 131st St., N. Y.
 U. S. Sanitary Spec. Corp., 435 S. Western Ave., Chicago
 Wilco Co., 6800 McKinley Ave., Chicago

Windsor Wax Co., 611 Newark St., Hoboken, N. J.
 G. H. Wood & Co., Toronto, Canada

CLIPS (for collapsible Tubes) (see also Tubes, Collapsible)

Acme Clip & Mfg. Co., 426 S. Clinton St., Chicago
 Arthur Colton Co., Detroit
 George G. Rodgers Co., 225 W. 34th St., N. Y.
 Standard Spec. & Tube Co., New Brighton, Pa.

CLOSURES (See also Can Spouts, also Caps)

Anchor Hocking Glass Corp., Lancaster, O.
 Aridor Co., 3428 W. 48th Pl., Chicago
 Closure Service Co., Toledo, O.
 Continental Can Co., 100 E. 42nd St., N. Y.
 Crown Cork & Seal Co., Baltimore
 Crown Cork Specialty Corp., Decatur, Ill.
 Satisfaction Supply Co., 508 W. Broadway, N. Y.
 Seal Spout Corp., 363 Jelliff Ave., Newark 8, N. J.

CLOVE OIL (see Essential Oils)

COAL TAR DISINFECTANTS (see Disinfectants)

COAL TAR RAW MATERIALS (Cresols, Creosote Oil, Cresylic Acid, etc.)

American-British Chem. Supplies, 180 Madison Ave.,
 N. Y.
 American Cyanamid & Chem. Corp., 30 Rockefeller
 Plaza, N. Y.
 Baird & McGuire, Holbrook, Mass.
 Barrett Div., Allied Chem. & Dye Corp., 40 Rector
 St., N. Y.
 S. H. Bell Co., 1407 Gulf Bldg., Pittsburgh
 Chemical Sales Corp., Pittsburgh, 19
 Coal Tar Chemicals Corp., 420 Lexington Ave., N. Y.
 T. G. Cooper & Co., Cedar & Venango Sts., Phila. 34
 Wm. Cooper & Nephews, 1909 Clifton Ave., Chicago
 Disco Co., 1124 Oliver Bldg., Pittsburgh, Pa.
 E. I. Du Pont de Nemours & Co., Wilmington, Del.
 James Huggins & Son, Malden, Mass.
 Innis, Speiden & Co., 117 Liberty St., N. Y.
 William E. Jordan & Bro., 2590 Atlantic Ave., Brooklyn
 Koppers Co., Koppers Bldg., Pittsburgh, Pa.
 Monsanto Chemical Co., 1700 S. 2nd St., St. Louis
 William D. Neuberger Co., 420 Lexington Ave., N. Y.
 Neville Co., Pittsburgh, Pa.
 Reilly Tar & Chemical Co., Indianapolis
 Standard Naphthalene Prods. Co., S. Kearny, N. J.
 James Varley & Sons, 1200 Switzer Ave., St. Louis

COCOA BUTTER

Walter Baker & Co., 601 W. 26th St., N. Y.
 Durkee Famous Foods, Inc., 2670 Elston Ave., Chicago
 R. W. Greeff & Co., 10 Rockefeller Plaza, N. Y.
 Hershey Estates, Hershey, Penna.
 Spencer Kellogg & Sons, Buffalo, N. Y.
 Monsanto Chemical Co., 1700 S. 2nd St., St. Louis, 4
 Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
 A. N. Stollwerck Co., Camden, N. J.
 Welch, Holme & Clark, 439 West St., N. Y.

COCONUT OIL

(see also Brokers and Dealers)

Atkins, Kroll & Co., 250 California St., San Francisco
 Balfour, Guthrie & Co., 67 Wall St., N. Y.
 Best Foods, Inc., 88 Lexington Ave., N. Y.
 John H. Calo, 19 Rector St., N. Y. 6
 Capital City Products Co., Columbus, O.
 T. G. Cooper & Co., Cedar & Venango Sts., Phila. 34
 E. F. Drew & Co., Wecoline Div., Boonton, N. J.
 Durkee Famous Foods, Inc., 2670 Elston Ave., Chicago
 Eastern Industries, Inc., Ridgefield, N. J.
 El Dorado Oil Wks., 313 California St., San Francisco
 Franklin Baker Co., 1500 Bloomfield St., Hoboken, N. J.

NEED COLORS FOR SOAPS, COSMETICS?

Then let PYLAM SERVE YOU.

For over 31 years we have been supplying fast colors to soap-makers over the entire world. You too will be pleased with our colors and service.

***PYLAKLORS**—Fast colors for all soaps.

***PYLA-CERTS**—Certified colors for shampoos, tonics, perfumes and cosmetics.

***PYLAKROMES**—OIL, FAT and WAX Soluble Colors.

OUR PRICES ARE RIGHT

SEND FOR FREE SAMPLES

SEND FOR COMPLETE PRICE LIST

* Registered U. S. Patent Office.

PYLAM PRODUCTS COMPANY, Inc.

Manufacturing Color Chemists, Exporters

799 GREENWICH STREET



NEW YORK CITY

Cable Address: PYLAMCO

COCONUT OIL (Contd.)

Spencer Kellogg & Sons, Buffalo, N. Y.
Pacific Veg. Oil Corp., 62 Townsend St., San Francisco
Procter & Gamble Co., Cincinnati
J. H. Redding Co., 17 Battery Pl., N. Y.
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Smith-Weihman Co., 15 Moore St., N. Y.
A. E. Starkie Co., 5461 W. Division St., Chicago
Welch, Holme & Clark Co., 439 West St., N. Y.

COCONUT FATTY ACIDS, See Fatty Acids

COCONUT OIL SOAPS (see Hard Water Soaps)

COCONUT OIL BASE SOAP (see Potash Soaps)

COCONUT OIL SHAMPOO BASE (see Shampoo Base and Potash Soaps)

COCONUT OIL POWDERED SOAP (see Soaps, Powdered)

COLLOID MILLS

Abbe Engineering Co., 50 Church St., N. Y.
Colloid Equip. Co., 50 Church St., N. Y.
Consolidated Products Co., 15 Park Row, N. Y. (Used)
J. H. Day Co., 1144 Harrison Ave., Cincinnati
Eppembach, Inc., 45-10 Vernon Blvd., Long Island City, N. Y.
Manton-Gaulin Mfg. Co., 19 Charlton St., Everett, Mass.
Newman Tallow & Soap Mach. Co., 1051 W. 35th St., Chicago (Used)
Pfaudler Co., Rochester, N. Y.

Milton F. Robie, 30 Pittsburgh St., Boston
Stein Equipment Corp., 90 West St., N. Y. (Used)
U. S. Colloid Mill Corp., 24-16 Bridge Plaza, S., L. I. City

COLORS, CERTIFIED

Ansbacher-Siegle Corp., Rosebank, Staten Island, N. Y.
Calco Chem. Division of American Cyanamid Co., Bound Brook, N. J.
Fezandie & Sperrle, 205 Fulton St., New York
Geigy Co., 89 Barclay St., N. Y.
Interstate Color Co., 5 Beekman St., New York
H. Kohnstamm & Co., 91 Park Place, New York
National Aniline Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Pylam Products Co., 799 Greenwich St., New York

COLORS (see also Essential Oils)

American Aniline Prod., Inc., 50 Union Sq., N. Y.
American Cyanamid & Chem. Corp., 30 Rockefeller Plaza, N. Y.
Stanley Doggett, Inc., 75 Varick St., N. Y.
E. I. Du Pont de Nemours & Co., Wilmington, Del.
Dyestuffs & Chemicals, Inc., 11th & Monroe Sts., St. Louis
Fezandie & Sperrle, 205 Fulton St., N. Y.
Geigy Co., 89 Barclay St., N. Y.
General Dyestuffs Corp., 435 Hudson St., N. Y.
Interstate Color Co., 5 Beekman St., N. Y.
H. Kohnstamm & Co., 91 Park Pl., N. Y.
Leeben Chem. Co., 389 Washington St., N. Y.
National Aniline Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Tamm's Silica Co., 228 N. La Salle St., Chicago
Pylam Products Co., 799 Greenwich St., N. Y.
R. F. Revson Co., 144 W. 18th St., N. Y.
Sandoz Chem. Wks., 61 Van Dam St., N. Y.
Welch, Holme & Clark Co., 439 West St., N. Y.

*Throw away your
old BLUE BOOK!*

PUT THIS ONE IN ITS PLACE IN YOUR DESK . . . THE 1947 **BLUE BOOK** IS NOW OUT-OF-DATE . . . OBSOLETE . . . CONTAINS ADDRESSES WHICH HAVE SINCE BEEN CHANGED . . . AND OTHER INFORMATION WHICH WAS NEW A YEAR AGO . . . BUT IS NOW OLD . . . AND POSSIBLY WRONG. DISCARD THAT OLD 1947 EDITION **NOW!** USE THIS 1948 EDITION FROM NOW ON.

THE PUBLISHERS.

SKINNER & SHERMAN, INC.

246 Stuart Street

Bacteriologists & Chemists

Boston 16, Mass.

Bacteriology in all phases of its application to food processing, sanitation, and disinfectant testing.

Chemical analyses of all commercial materials.

Official Chemists of Rubber Manufacturers Association, Inc., for Testing of Rubber Floor Polishes and Cleaners.

RESEARCH CHEMISTS and ENGINEERS

A staff of 75 including chemists, engineers, bacteriologists and medical personnel with 10 stories of laboratories and a pilot plant are available for the solution of your chemical and engineering problems.

Write today for Booklet No. 22

"The Chemical Consultant and Your Business"

FOSTER D. SNELL, INC.

29 WEST 15TH STREET

NEW YORK 11, N. Y.

ALBERT J. BENDLER

Consulting Engineer

Soaps, Rendering, Fatty Acids, Glycerine, Fats and Oils
Process Design — Plant Design and Layout — Packaging and Conveying
Corrosion, Metallurgical Problems and Specifications
Metal Contamination in the Soap Plant
Design for High Pressures and Fabrication
Maintenance Programs and Electronic Applications

233 Broadway

New York City 7

LANCASTER, ALLWINE & ROMMEL

Registered Patent Attorneys

815—15th STREET, N. W. Suite 402 WASHINGTON 5, D. C.

Patent and Trade-Mark Practice before U. S. Patent
Office. Validity and Infringement Investigations and Opinions.

Booklet and form "Evidence of Conception" forwarded upon request.

COMPRESSORS (Air)

Beach-Russ Co., 50 Church St., N. Y.
Binks Mfg. Co., 3114 Carroll Ave., Chicago
Consolidated Prods. Co., 15 Park Row, N. Y. (Used)
Crowell Mfg. Co., 177 Clifton Pl., Brooklyn
De Vilbiss Co., Toledo, O.
Electric Sprayit Co., 1415 Illinois Ave., Sheboygan, Wis.
Fairbanks-Morse & Co., 80 Broad St., N. Y.
First Machy. Corp., 157 Hudson St., N. Y. (Used)
Foster Pump Works, 51 Washington St., Brooklyn
Fumeral Co., Racine, Wisc.
Ingersoll-Rand Co., 11 Broadway, N. Y.
Miller-Simons, Inc., Cicero, Ill.
Nash Engineering Co., South Norwalk, N. Y.
Newman Tallow & Soap Machy. Co., 1051 W. 35th St., Chicago (Used)
Stein Equipment Corp., 90 West St., N. Y. (Used)
Worthington Pump & Machinery Corp., 2 Park Ave., N. Y.

CONSULTANTS (Chemists, Engineers, Testing Laboratories, Etc.)

Applied Research Laboratories, Dayton, N. J.
Albert J. Bendler, 200 Hart Blvd., Staten Island, N. Y.
Benson Process Eng. Co., Eden, N. Y.
Columbus Labs., 33 N. State St., Chicago
Alvin J. Cox, 1118 Emerson St., Palo Alto, Calif.
Curtis & Tompkins, Ltd., 236 Front St., San Francisco, Calif.
Dairy Laboratories, 2300 Locust St., Phila.
E. R. de Ong, 503 Market St., San Francisco
Elite Laboratories, 153 Center St., N. Y.
Entomological Testing Labs., 114 E. 32nd St., N. Y.
Wm. Garrigue & Co., 9 S. Clinton St., Chicago
Hochstadter Laboratories, Inc., 23 W. 47th St., N. Y.
Illinois Chemical Labs., Gridley, Ill.
James Laboratories, 189 W. Madison St., Chicago.
La Wall & Harrison, 214 S. 12th St., Phila.
Lederer Bacteriological Labs., 269 S. 19th St., Phila.
Alan Porter Lee, Inc., 150 Broadway, N. Y.
Harold A. Levey Laboratories, Oleander & Dublin Sts., New Orleans
J. W. McCutcheon, 475 Fifth Ave., N. Y.
C. C. McDonnell, 122 Hesketh St., Chevy Chase, Md.
Molnan Laboratories, 211 E. 19th St., N. Y.
Pease Laboratories, 39 W. 38th St., N. Y.
Rosoff Laboratories, 60th & Osage, Phila.
Samuel P. Sadtler & Son, 210 S. 13th St., Phila.
J. Casper Schwarz, No. 4 Wakefield, Ladue, St. Louis County, 17, Missouri.
Seil, Putt & Rusby, 16 E. 34th St., N. Y.
Skinner & Sherman, 246 Stuart St., Boston
Foster D. Snell, 29 W. 15th St., N. Y.
Stillwell & Gladding, 130 Cedar St., N. Y.
E. G. Thomssen, 306 Center St., Winona, Minn.
United States Testing Co., 1415 Park Ave., Hoboken, N. J.
Whitmire Res. Labs., 339 S. Vandeventer, St. Louis
Wurster & Sanger, 5201 Kenwood Ave., Chicago

CONTAINERS, SHIPPING (see Boxes)

CONVEYORS

Alsop Engineering Corp., 100 High St., Milldale, Conn.
Bailey-Buruss Co., Atlanta, Ga.
H. W. Caldwell & Son Co., 2410 W. 18th St., Chicago
Consolidated Prods. Co., 15 Park Row, N. Y. (Used)
J. H. Day Co., 1144 Harrison Ave., Cincinnati
Dow Co., 1025 Franklin St., Louisville, Ky.
Filter Paper Co., 2464 S. Michigan Ave., Chicago
First Machy. Corp., 157 Hudson St., N. Y. (Used)
Wm. Garrigue & Co., 9 S. Clinton St., Chicago
B. F. Gump Co., 431 S. Clinton St., Chicago
Horix Mfg. Co., Pittsburgh
Houchin Machinery Co., Hawthorne, N. J.
Jeffrey Mfg. Co., 924 N. 4th St., Columbus, O.
Karl Kiefer Machine Co., 919 Martin St., Cincinnati
Lancaster Iron Works, Lancaster, Pa.
Link-Belt Co., 910 S. Michigan, Chicago

M. R. M. Co., 191 Berry St., Bklyn.
Newman Tallow & Soap Machy. Co., 1051 W. 35th St., Chicago
Pneumatic Scale Corp., North Quincy, Mass.
Read Machy. Co., York, Pa.
George G. Rodgers Co., 225 W. 34th St., N. Y.
Sprout Waldron & Co., Muncy, Pa.
Standard Conveyor Co., N. St. Paul, Minn.
Stein Equipment Co., 90 West St., N. Y. (Used)
Stephens-Adamsen Mfg. Co., Aurora, Ill.
Sterns Conveyor Co., Cleveland
F. J. Stokes Machine Co., Tabor Rd., Phila., Pa.
Triangle Package Machy. Co., 906 N. Spaulding Ave., Chicago
Weigh Right Automatic Scale Co., 404 Grant Ave., Joliet, Ill.

COPPER NAPHTHENATE

Cuprinol, Inc., 7 Water St., Boston
General Petroleum Corp. of Calif., 108 W. 2nd St., Los Angeles
Harshaw Chemical Co., 1945 E. 97th St., Cleveland
Nuodex Prods. Co., 312 Division St., Elizabeth, N. J.
Oronite Chemical Co., 200 Bush St., San Francisco

COPPER SULFATE (Blue Vitriol)

American Cyanamid & Chem. Corp., 30 Rockefeller Plaza, N. Y.
J. T. Baker Chem. Co., Phillipsburg, N. J.
Brooklyne Chem. Wks., Baltimore, 25, Md.
Chem. Service Co. of Balto., Howard & West Sts., Balto.
Dow Chemical Co., Midland, Mich.
E. I. Du Pont de Nemours & Co., Wilmington, Del.
Faesy & Besthoff, Inc., 220 E. 42nd St., N. Y. 17
General Chemical Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Harshaw Chemical Co., 1945 E. 97th St., Cleveland
Innis, Speiden & Co., 117 Liberty St., N. Y.
Merck & Co., Rahway, N. J.
Phelps Dodge Refining Corp., 40 Wall St., N. Y. 5.
Raritan Copper Wks., Perth Amboy, N. J.
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Sergeant Chem. Co., 7 Dey St., N. Y.
Tennessee Copper Co., 61 Broadway, N. Y.
Tennessee Corp., Atlanta, Ga.

CORKING MACHINERY

Edward Ermold Co., 652 Hudson St., N. Y.
Horix Mfg. Co., Pittsburgh
Karl Kiefer Machine Co., 919 Martin St., Cincinnati
Newman, Tallow & Soap Mch. Co., 1051 W. 35th St., Chicago
Pneumatic Scale Corp., North Quincy, Mass.
Satisfaction Supply Co., 508 W. Broadway, N. Y.
U. S. Bottlers Mch. Co., 4015 N. Rockwell St., Chicago

CORKS

Armstrong Cork Co., Lancaster, Pa.
Cork Import Corp., 330 W. 42nd St., N. Y.
Dodge Cork Co., Lancaster, Pa.

CORN OIL

(see also Brokers and Dealers)

American Maize Prods. Co., 110 E. 42nd St., N. Y.
Balfour, Guthrie & Co., Ltd., 67 Wall St., N. Y.
T. G. Cooper & Co., Cedar & Venango Sts., Phila.
Corn Products Refining Co., 17 Battery Pl., N. Y.
Durkee Famous Foods, Inc., 2670 Elston Ave., Chicago
Early & Daniel Co., Ingalls Bldg., Cincinnati
Otto A. C. Hagen Corp., 929 Public Ledger Bldg., Phila.
Spencer Kellogg & Sons, Buffalo, N. Y.
Leghorn Trading Co., 21 West St., N. Y.
National Starch Products, 270 Madison Ave., N. Y.
Sergeant Chem. Co., 7 Dey St., N. Y.
A. E. Starkie, 5461 W. Division St., Chicago
Welch, Holme & Clark Co., 439 West St., N. Y.
Woolner & Co., Peoria, Ill.

LET GEIGY HELP YOU OPEN THE
DOOR TO ASSURED RESULTS IN THE
COMPOUNDING OF DDT INSECTICIDES



GEIGY COMPANY, INC.

"Originators of DDT Insecticides"

89 BARCLAY STREET, NEW YORK 8, N. Y.

COSMETICS (Private Brand Compacts, Lipsticks, etc.)

Allied Products, Inc., Suffern, N. Y.
 Amer. Perfumers Labs., 30 Rockefeller Plaza, N. Y.
 Corn King Co., Cedar Rapids, Ia.
 Richard Genell, Inc., 200 W. Houston St., N. Y.
 Luxor, Ltd., 1355 W. 31st St., Chicago
 Nopco Chemical Co., Harrison, N. J.
 Schmidt Soap Products 236 W. North Ave., Chicago
 Julius Schmid, Inc., 423 W. 56th St., N. Y.
 Allen B. Wrisley Co., 6801 W. 65th St., Chicago

COTTONSEED FATTY ACIDS (and Soapstock)*(see also Brokers and Dealers)*

Armour Chem. Div., Armour & Co., 1355 W. 31st St., Chicago.
 T. G. Cooper & Co., Cedar & Venango Sts., Phila.
 E. F. Drew & Co., Wecoline Div., Boonton, N. J.
 Durkee Famous Foods, Inc., 2670 Elston Ave., Chicago
 Eastern Industries, Inc., Ridgefield, N. J.
 Emery Industries, Inc., 4300 Carew Tower, Cincinnati
 Griffin Chem. Co., 1000 16th St., San Francisco
 A. Gross & Co., 295 Madison Ave., N. Y.
 Otto A. C. Hagen Corp., 929 Public Ledger Bldg., Phila.
 W. C. Hardesty Co., 41 E. 42nd St., N. Y.
 Spencer-Kellogg & Sons, Buffalo, N. Y.
 Portsmouth Cotton Oil Refining Co., Portsmouth, Va.
 Procter & Gamble Co., Cincinnati, O.
 J. H. Redding, Inc., 17 Battery Place, N. Y.
 Sergeant Chem. Co., 7 Dey St., N. Y.
 Werner G. Smith Co., 2191 W. 110th St., Cleveland
 Southern Cotton Oil Co., Produce Exchange, N. Y.
 A. E. Starkie, 5461 W. Division St., Chicago
 Welch Holme & Clark Co., 439 West St., N. Y.
 Wilson-Martin Co., Swanson St., Phila.
 Woburn Chemical Corp., Harrison, N. J.

COTTONSEED OIL*(see also Brokers and Dealers)*

Durkee Famous Foods, Inc., 2670 Elston Ave., Chicago
 Eastern Industries, Inc., Ridgefield, N. J.
 Otto A. C. Hagen Corp., 929 Public Ledger Bldg., Phila.
 Spencer Kellogg & Sons, Buffalo, N. Y.
 Portsmouth Cotton Oil Refining Corp., Portsmouth, Va.
 Procter & Gamble Co., Cincinnati, O.
 J. H. Redding Co., 17 Battery Pl., N. Y.
 Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
 Sergeant Chem. Co., 7 Dey St., N. Y.
 C. F. Simonin's Sons, Phila.
 Southern Cotton Oil Co., Produce Exchange, N. Y.
 A. E. Starkie Co., 5461 W. Division St., Chicago
 Welch Holme & Clark Co., 439 West St., N. Y.

COUMARIN*(see also Aromatic Chemicals)*

Aromatic Products, Inc., 15 E. 30th St., N. Y.
 Dodge & Olcott, Inc., 180 Varick St., N. Y.
 Dow Chemical Co., Midland, Mich.
 E. I. Du Pont de Nemours & Co., Wilmington, Del.
 General Drug Co., 644 Pacific St., Brooklyn
 Givaudan-Delawanna, 330 W. 42nd St., N. Y.
 Maywood Chemical Wks., Maywood, N. J.
 Merck & Co., Rahway, N. J.
 Monsanto Chemical Co., 1700 S. 2nd St., St. Louis
 Naugatuck Aromatics, 254 Fourth Ave., N. Y.
 Schimmel & Co., 601 W. 26th St., N. Y.

CREOSOTE OIL (see Coal Tar Raw Materials)**CRESOL COMPOUND, U.S.P. and Technical**
*(see Disinfectants, Coal Tar)***CRESOLS (see Coal Tar Raw Materials)****CRESYLIC ACID (see Coal Tar Raw Materials)****CRESYLIC ACID, (Petroleum Origin)**

California Commercial Co., 30 Rockefeller Plaza, N. Y.
 Oronite Chem. Co., 200 Bush St., San Francisco 4
 Reilly Tar & Chem. Corp., Indianapolis
 Shell Oil Co., 50 W. 50th St., N. Y.
 Standard Oil Co. of Calif., San Francisco

CRUTCHERS

Allied Steel & Equipment Co., 1007 Springfield Ave., Irvington, N. J.
 Atlas Steel Construction Co., Irvington, N. Y.
 Consolidated Prods. Co., 15 Park Row, N. Y. (Used)
 Edge Moor Iron Wks., Edge Moor, Del.
 First Machy. Corp., 157 Hudson St., N. Y. (Used)
 Houchin Machinery Co., Hawthorne, N. J.
 Huber Machine Co., 259—46th St., Brooklyn
 Littleford Bros., 443 E. Pearl St., Cincinnati
 Newman Tallow & Soap Machy. Co., 1051 W. 35th St., Chicago
 H. K. Porter Co., Oliver Bldg., Pittsburgh.
 Ernest Scott & Co., Fall River, Mass.
 Sowers, Mfg. Co., 1296 Niagara St., Buffalo, N. Y.
 Stein Equipment Co., 90 West St., N. Y. (Used)
 Struthers-Wells Co., Warren, Pa.

CUBE

Chipman Chem. Co., Bound Brook, N. J.
 Derris, Inc., 79 Wall St., N. Y.
 Enco Chem. Corp., 441 Lexington Ave. N. Y.
 Greene Trading Co., 70 Pine St., N. Y.
 Hammond Paint & Chem. Co., Beacon, N. Y.
 J. L. Hopkins & Co., 220 Bway., N. Y.
 Ketoid Chem. Co., 549 W. Washington, Chicago
 Lenape Trading Co., 233 Broadway, N. Y.
 McCormick & Co., Baltimore, Md.
 Orbis Products Corp., 215 Pearl St., N. Y.
 S. B. Penick & Co., 50 Church St., N. Y.
 John Powell & Co., 1 Park Ave., N. Y.
 R. J. Prentiss & Co., 110 William St., N. Y.
 Frank B. Ross Co., 507—8th St., Hoboken, N. J.
 Stauffer Chemical Co., 420 Lexington Ave., N. Y.
 U. S. Industrial Chemicals, Inc., 60 E. 42nd St., N. Y. C.
 Whitmire Research Corp., 839 S. Vandeventer, St. Louis

CUTTING TABLES (see Soap Machinery)**CYANIDES (see Fumigants) (see Sodium Cyanide)****DDT (Dichloro-diphenyl-trichloroethane)**

J. T. Baker Chemical Co., Phillipsburg, N. J.
 E. I. du Pont de Nemours & Co., Wilmington, Del.
 Geigy Co., Inc., 89 Barclay St., N. Y.
 General Chemical Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
 R. W. Greeff & Co., 10 Rockefeller Plaza, N. Y.
 Kolker Chem. Works, 80 Lister Ave., Newark, N. J.
 Merck & Co., Rahway, N. J.
 Michigan Chem. Corp., St. Louis, Mich.
 Monsanto Chemical Co., 1700 S. 2nd St., St. Louis, Mo.
 Montrose Chem. Co., 120 Lister Ave., Newark, N. J.
 Pennsylvania Salt Mfg. Co., Widener Bldg., Phila.
 Rohm & Haas Co., 222 W. Washington Sq., Philadelphia
 Stauffer Chemical Co., 420 Lexington Ave., N. Y.
 Westvaco Chlorine Prods. Co., 405 Lexington Ave., N. Y.

DDT FORMULATIONS (Liquids and Powders)

Associated Chemists, Inc., 1906 N. Halsted St., Chicago
 Central Chemical Co., 5137 S. West Ave., St. Louis
 Derris, Inc., 79 Wall St., N. Y.
 Eston Chemicals, Inc., 3100 E. 26th St., Los Angeles
 Fuld Bros., 702 S. Wolfe St., Baltimore
 Geigy Co., Inc., 89 Barclay St., N. Y.
 Griffin Chem. Co., 1000 16th St., San Francisco
 Hercules Powder Co., Wilmington
 Hysan Products Co., 932 W. 38th Pl., Chicago

MERCK IS SERVING THE INSECTICIDE INDUSTRY AS A BASIC AND PRIME SOURCE OF SUPPLY FOR DDT



An aerial view of the Main Plant of Merck & Co., Inc. at Rahway, N. J.

As expanding facilities come into operation and current commitments are provided for, we are finding increasing opportunities to co-operate with manufacturers of DDT insecticides.

The product we offer is —

DDT TECHNICAL

(dichloro-diphenyl-trichloroethane)

Setting Point 89° C. Minimum
For Manufacturing Purposes Only

Write us for prices and let us know your requirements. Please address your inquiry to the Insecticide Products Department, Merck & Co., Inc., Rahway, N. J.

DDT TECHNICAL

For the Manufacture of Agricultural, Livestock,
Horticultural, and Household Insecticides

MERCK & CO., Inc. RAHWAY, N. J.

Manufacturing Chemists

New York, N. Y. • Philadelphia, Pa. • St. Louis, Mo. • Chicago, Ill. • Elton, Va.
Los Angeles, Calif. • In Canada: MERCK & CO., Ltd., Montreal • Toronto • Valleyfield



DDT FORMULATIONS (Contd.)

Imperial Products Co., 1600 Fountain St., Phila.
Industrial Management Corp., 458 S. Spring St., Los Angeles, Cal.
McLaughlin, Gormley King Co., Minneapolis
Orbis Products Corp., 215 Pearl St., N. Y.
S. B. Penick & Co., 50 Church St., N. Y.
Penna. Salt Mfg. Co., Widener Bldg., Phila.
John Powell & Co., 1 Park Ave., N. Y.
R. J. Prentiss & Co., 110 William St., N. Y.
Regal Chem. Corp., Bklyn., 22
Rohm & Haas Co., 222 W. Washington Sq., Phila.

DEALERS (Chemicals)

Akron Chem. Co., 1025 Sweitzer Ave., Akron, Ohio
Alrose Chem. Co., 80 Clifford St., Providence, R. I.
American-British Chem. Supplies, 180 Madison Ave., N.Y.
American Cyanamid & Chem. Corp.,
30 Rockefeller Plaza, N. Y.
American Oil & Supply Co., 236 Wilson Ave.,
Newark, N. J.
Axton-Cross Co., Cheshire, Conn.
Baker & Gaffney, Drexel Bldg., Philadelphia
H. J. Baker & Bro., 271 Madison Ave., N. Y.
Barada & Page, Kansas City, Mo.
S. H. Bell Co., 1407 Gulf Bldg., Pittsburgh
Benner Chemical Co., 20 N. Wacker St., Chicago
Braun-Knecht-Heimann Co., 584 Mission St.,
San Francisco
Buckeye Soda Products Co., 32 Main St., Cincinnati
John H. Calo & Co., 19 Rector St., N. Y.
John A. Chew, Inc., 60 E. 42nd St., N. Y.
Alan A. Clafin, 88 Broad St., Boston
Consumers Chemical Co., Drexel Bldg., Philadelphia
T. G. Cooper & Co., Cedar & Venango Sts., Phila. 34
Dickerson Co., Drexel Bldg., Phila.
Doe & Ingalls, 56 Garden St., Boston
A. C. Drury & Co., 219 E. North Water St., Chicago

Eastern Industries, Ridgefield, N. J.
Eaton Clark Co., 1490 Franklin St., Detroit
Elkay Products Co., 323 W. 16th St., N. Y.
Enco Chem. Corp., 441 Lexington Ave., N. Y.
F. P. L. Chemical Co., 647 West Virginia St., Milwaukee
Faesy & Besthoff, 220 E. 42nd St., N. Y. 17
Alex C. Fergusson Co., Drexel Bldg., Phila.
Fort Pitt Chemical Co., 3134 Penn Ave., Pittsburgh
Gaylord Chem. Co., 701 Woodswether Rd., Kansas City
General Drug Co., 170 Varick St., N. Y.
Globe Chemical Co., Murray Road, Cincinnati
Griffin Chem. Co., 1000 16th St., San Francisco
Otto A. C. Hagen Corp., 929 Public Ledger Bldg., Phila.
C. P. Hall Co., Akron, Ohio
Harshaw Chemical Co., 1945 E. 97th St., Cleveland
Herbert Chem. Co., Vine & Murray Rd., Cincinnati
Arnold Hoffman & Co., 55 Canal St., Providence, R. I.
Howe & French, 99 Broad St., Boston
Hummel Chemical Co., 90 West St., N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Wm. E. Jordan & Bro., Inc., 2590 Atlantic Ave., Brooklyn
E. & F. King & Co., 405 Atlantic Ave., Boston
Los Angeles Chem. Co., 2200 Santa Fe Ave., Los Angeles
John F. Maher & Co., 1600 Henderson St., Houston, Tex.
George Mann & Co., 251 Fox Point Blvd.,
Providence, R. I.
Merchants Chemical Co.,
60 East 40th St., N. Y.
Millard-Heath Co., 14 Pine St., St. Louis
Clarence Morgan & Co., 355 W. Ontario St., Chicago
Mulcahy & Griffin, 141 Milk St., Boston
National Oil & Supply Co., 172 Frelinghuysen Ave.,
Newark, N. J.
National Sales Co., 31 E. 13th St., Cincinnati
Wm. D. Neuberger Co., 420 Lexington Ave., N. Y.
Neumann-Buslee & Wolfe, 224 W. Huron St., Chicago
Newman Tallow & Soap Machinery Co., 1051 W. 35th St.,
Chicago
R. Peltz Co., 995 Drexel Bldg., Philadelphia
Pfaltz & Bauer, Inc., 350 5th Ave., N. Y.
Philipp Bros. Chemicals, 37 Wall St., N. Y.

RAW MATERIALS

FOR THE SOAP AND ALLIED INDUSTRIES:

Every raw material necessary for the manufacture of soap and allied products is carried in stock and is available at the right price for immediate delivery to your door.

ALCOHOL
AMMONIA
BLEACHING POWDER
BORAX
BICARBONATE OF SODA
CARBON TETRACHLORIDE
CALCIUM CHLORIDE
CAUSTIC SODA
CAUSTIC POTASH
DYES
DISODIUM PHOSPHATE
GLAUBER'S SALTS
GLYCERINE
METASILICATE
OXALIC ACID

POTASSIUM CARBONATE
SAL AMMONIAC
SALT
SAL SODA
SILICATE OF SODA
SODA ASH
TRISODIUM PHOSPHATE
CASTOR OIL
COCOANUT OIL
CORN OIL
COTTONSEED OIL
LARD OIL
MEATFOOT OIL
OLEIC ACID - RED OIL
OLIVE OIL

OLIVE OIL FOOTS
PALM OIL
PALM KERNEL OIL
PEANUT OIL
RAPESEED OIL
ROBIN
SALAD OIL
SOYA BEAN OIL
SESAME OIL
TEASEED OIL
WHITE OLEINE
FATTY ACID
STEARINE
STEARIC ACID
GREASE
TALLOW

Telephone: MORsemere 6-4870

Direct New York Telephone: CHickering 4-7533

Animal Oils, Fats, Chemicals

Vegetable Oils

Drums-Tank Cars-Tank Wagons

COCOANUT OIL

CAUSTIC POTASH

STEARIC ACID

CAUSTIC SODA

RED OIL

TALLOW



EASTERN INDUSTRIES DIVISION JOSEPH TURNER & CO.

RIDGEFIELD, N. J.

RAW MATERIALS *for the* SOAP INDUSTRY

1838-1948

"Over a Century of Experience"

COCOANUT OIL

Apricot Kernel Oil
Corn Oil
Cottonseed Oil
Olive Oil
Olive Oil Foots
Peanut Oil
Rapeseed Oil
Sesame Oil
Soya Bean Oil
Lard Oils
Neatsfoot Oil
Lanoline

Tallow
Grease
Oleo Stearine
Superfating Agent
Babassu Oil
Soap Colors
Fatty Acids
Stearic Acid
Red Oil
White Olein
Caustic Soda

Soda Ash
Caustic Potash
Carbonate Potash
Silicate Soda
Metasilicate Soda
Modified Soda
Sal Soda
Tri Sodium Phosphate
Di Sodium Phosphate
Borax
Boric Acid

FATTY ACIDS
TEXTILE STARCH
BUBBLING AGENT

BATH POWDER
BATH OILS
PARADICHLORBENZENE

QUADRAFOS
PETROLATUM
WHITE MINERAL OILS

CHLOROPHYLL
LECITHIN

MAYPON 4C — MAYPON K
SURFACE ACTIVE AGENTS
SYNTHETIC DETERGENTS

They wet, foam, emulsify, disperse.
Non-toxic — stable in hard water.

QUADRAFOS
A polyphosphate
water softener

COCOANUT FATTY ACIDS
VEGETABLE OIL FATTY ACIDS
ANIMAL AND FISH OIL FATTY ACIDS

MIXTURES OF YOUR FORMULAS

Welch, Holme & Clark will mix dry alkalis and starches
to your own formulas. Let us handle this operation for
you.

WELCH, HOLME & CLARK CO., Inc.

Office: 439 WEST STREET

ESTABLISHED 1838

NEW YORK 14, N. Y.

Warehouses: New York City; Newark, N. J.

DEALERS, CHEMICALS (Contd.)

H. B. Prior Co., 420 Lexington Ave., N. Y.
 Providence Textile Chem. Co., 2 Randall St.,
 Providence, R. I.
 Chas. L. Read & Co., 120 Greenwich St., N. Y.
 R. F. Revson Co., 144 W. 18th St., N. Y.
 James H. Rhodes & Co., 153 W. Hubbard St., Chicago
 G. S. Robins & Co., 126 Chouteau Ave., St. Louis
 Rodgers Chemical Co., Fitzsimmons Bldg., Pittsburgh
 Rogers & McClellan, 143 Milk St., Boston
 Rohm & Haas Co., Inc., 222 W. Washington Sq., Phila.
 Rosenthal Berrow Co., 25 E. 26th St., N. Y.
 Sanders & Sloat, 180 Bdw., N. Y.
 H. J. Rolls Chemical Co., Buffalo, N. Y.
 George Senn, Philadelphia Bourse, Phila.
 Sessions-Gifford Co., 255 Allens Ave., Providence, R. I.
 Siegel Chem. Co., 1 Hanson Pl., Brooklyn
 Irving M. Sobin Co., 72-74 Granite St., Boston
 J. U. Starkweather Co., Providence, R. I.
 Thompson-Hayward Chem. Co., 2915 Southwestern Blvd.,
 Kansas City
 Arthur C. Trask Co., 4103 S. La Salle St., Chicago, Ill.
 Jos. Turner & Co., Ridgefield, N. J.
 Chas. A. Wagner Co., 813 Callowhill St., Phila.
 Welch, Holme & Clark Co., 439 West St., N. Y.

DEALERS (Oils and Fats)

Balfour, Guthrie & Co., 67 Wall St., N. Y.
 John H. Calo Co., 19 Rector St., N. Y. 6
 T. G. Cooper & Co., Cedar & Venango Sts., Phila.
 Eastern Industries, Ridgefield, N. J.
 William Eisenstadt, 141 W. Jackson Blvd., Chicago
 E. H. Frey Co., 2 Broadway, N. Y.
 Alex. Fergusson Co., Drexel Bldg., Philadelphia
 Otto A. C. Hagen Corp., 929 Public Ledger Bldg., Phila.
 A. W. Harris Oil Co., Providence, R. I.
 J. H. Hinz Co., 825 Engineers Bldg., Cleveland
 Innes & Co., 82 Wall St., N. Y.
 E. G. James Co., 332 So. La Salle St., Chicago
 Kullman & Co., 339 Produce Exchange, N. Y.
 Leghorn Trading Co., 21 West St., N. Y.
 Miller & Co., 2401 Chestnut St., Philadelphia
 Clarence Morgan & Co., 919 N. Michigan, Chicago
 Murray Oil Products Co., 21 West St., N. Y.
 Newman Tallow & Soap Machinery Co., 1501 W. 35th St.,
 Chicago
 Rayner & Stonington, 79 Wall St., N. Y.
 Chas. L. Read & Co., 120 Greenwich St., N. Y.
 Rosenthal Berrow Co., 25 E. 26th St., N. Y.
 Willibald Schaefer Co., Foot of Boemen Ave., St. Louis
 George Senn, Philadelphia Bourse, Phila.
 Sergeant Chemical Co., 7 Dey St., N. Y.
 Siegel Chem. Co., 1 Hanson Pl., Brooklyn
 Smith-Weihman Co., 15 Moore St., N. Y.
 Swan-Finch Oil Corp., 30 Rockefeller Plaza, N. Y.
 Arthur C. Trask Co., 4103 S. La Salle St., Chicago
 Tunley & Co., 60 Beaver St., N. Y.
 Welch, Holme & Clark Co., 439 West St., N. Y.

DECOLORIZING CARBONS

Allied Carbon Co., Los Angeles, Calif.
 Atlas Powder Co., Wilmington, Del.
 Chemical Sales Corp., Pittsburgh, 19
 Cliffs-Dow Chem. Co., Marquette, Mich.
 Darco Sales Corp., 60 E. 42nd St., N. Y.
 Durkee Famous Foods, Inc., 2670 Elston Ave., Chicago
 Filter Paper Co., 2464 S. Michigan Ave., Chicago
 R. W. Greeff & Co., 10 Rockefeller Plaza, N. Y.
 Industrial Chem. Sales Div., West Va. Pulp & Paper Co.,
 230 Park Ave., N. Y.
 L. A. Salomon & Bros., 216 Pearl St., N. Y.
 Witco Chemical Co., 295 Madison Ave., N. Y.

DEODORIZED BASE OILS (see Petroleum Insecticide Base Oils, Deodorized)

DEODORIZED KEROSENE (see Petroleum Insecticide Base Oils)

DEGRAS (see Wool Grease)

1948 BLUE BOOK

Penn-Drake SOLVENTS

For DDT and other insecticides

INSECTI-SOL

INSECTI-SOL stays odorless and is 100% volatile—will not soil or stain since it evaporates completely. It floats longer, giving maximum penetration.

It works perfectly with DDT crystals in low concentrations or with solutions of DDT.

STAIN-FREE—Being colorless, and completely free from harmful ingredients, it can be sprayed freely on clothing, drapes, rugs, etc., without danger of stains.

100% VOLATILE—Penn-Drake Insecti-Sol floats the killing ingredients until the toxic action is completed and then entirely evaporates.

FULL-FLOATING—Provide your insecticides with longer lasting, easier floating, deeper penetrating qualities by specifying Penn-Drake Insecti-Sol.

EXCEEDS N.A.I.D.M. SPECIFICATIONS—Considerably above the minimum requirements of the National Association of Insecticide and Disinfectant Manufacturers.

Penn-Drake Insecti-Sol Specifications

A.P.I. Gravity	49	- 50.5
Specific Gravity	0.777	- 0.784
Saybold Vis. @ 100° F.	30	- 32 sec.
Flash Point	170°	-180° F.
Fire Point	185°	-195° F.
Initial Boiling Point	385°	-395° F.
Distillation End Point	485°	-495° F.
Unsulfonatable Residue		Above 99%
Color		Water White
Odor		Odor-Free

SUPER-SOL

A specially refined hydrocarbon of 53-55 gravity widely used for moth sprays where rapid evaporation is required. Better than ordinary base oils for DDT residual sprays because of its fast drying time and practically odorless qualities.

Penn-Drake Super-Sol Specifications

A.P.I. Gravity	53- 55
COC Flash °F	130-135
COC Fire °F	140-145
Initial Boiling Point °F	330-340
End Point °F	430-440

Highest
Quality
White Oils
Petrolatum



Write Dept. 109
For Complete
INSECTI-SOL
Information

PENNSYLVANIA REFINING COMPANY

GENERAL OFFICES: BUTLER, PA.

Refineries at Karns City and Titusville, Pa.

Makers of White Oil, Technical Oil, Petrolatum, Petroleum Sulphonates, Etc.

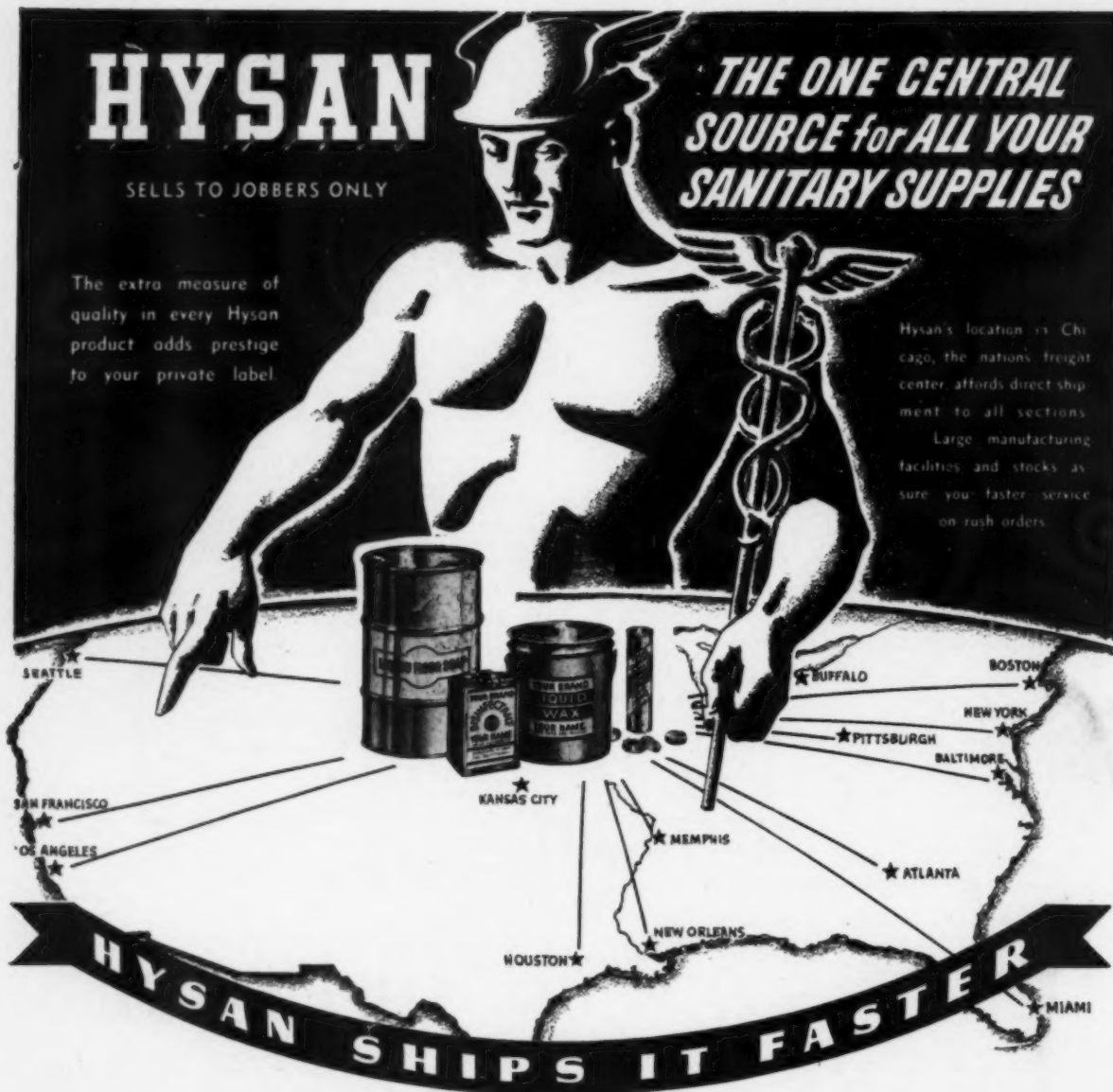
HYSAN

SELLS TO JOBBERS ONLY

**THE ONE CENTRAL
SOURCE for ALL YOUR
SANITARY SUPPLIES**

The extra measure of
quality in every Hysan
product adds prestige
to your private label.

Hysan's location in Chi-
cago, the nation's freight
center, affords direct ship-
ment to all sections.
Large manufacturing
facilities and stocks as-
sure you faster service
on rush orders.



**ORDER YOUR WAXES, DEODORANTS, CLEANERS, ETC. FROM
HYSAN AND ENJOY THESE REAL ADVANTAGES**

★ **SUPREME QUALITY**

Every item featured in Hysan's catalog is made from the choicest ingredients. Each product has been designed to enhance your prestige, assure your quality leadership.

★ **MORE NEW ITEMS**

Our field men find out what items your trade wants. Then our chemists proceed to make them. It is a fact that Hysan gives its jobbers many more new profit makers to sell each year.

★ **LOWER COSTS**

When you buy all your supplies from Hysan, you save on freight, bookkeeping, inventory. You purchase many premium quality waxes, cleaners, etc. at ordinary prices. These savings add up.

★ **DE LUXE PACKAGES**

The Hysan line is packaged to sell. It offers you many more deluxe containers. Private labels are more attractive. Hysan products have the eye appeal essential to the sale of quality goods.

★ **ADDED VOLUME**

Scores of standard Hysan products are engineered to meet users requirements more successfully than competitive products. This is reflected in your increased volume of sales per customer.

★ **REAL SALES HELPS**

Every new merchandising plan . . . all Hysan dealer postals, folders, wall cards, technical bulletins, etc. are available to every Hysan jobber for successful sales promotion.

**HERE IS THE
PROOF**

Hysan jobbers are today the fastest growing sanitary supply jobbers in the U.S.A. . . . Write for new Hysan catalog.

HYSAN PRODUCTS COMPANY, 932 WEST 38th PLACE, CHICAGO 9, ILLINOIS

CLEANERS • DISINFECTANTS • SOAPS • DEODORANTS • BLOCS • INSECTICIDES • POLISHES • WAXES • FLOOR TREATMENTS

DEGREASING COMPOUNDS (see Cleaners, Liquid)

DEODORIZING Block Holders (see Holders, Deodorizing Blocks)

DEODORIZING BLOCK PERFUMES (see Perfuming Compounds)

DEODORIZING BLOCK PRESSES (see Presses)

DEODORIZING AND BLEACHING EQUIPMENT (For Oils)

Foster-Wheeler Co., 165 Broadway, N. Y.
William Garrigue & Co., 9 S. Clinton St., Chicago
Houchin Machinery Co., Hawthorne, N. J.
Alan Porter Lee, Inc., 150 Broadway, N. Y.
Newman Tallow & Soap Machy. Co., 1051 W. 35th St., Chicago
Pfaudler Co., 89 East Ave., Rochester, N. Y.
Ernest Scott & Co., Fall River, Mass.
F. J. Stokes Machine Co., 5918 Tabor Rd., Phila.
Wurster & Sanger, 5201 Kenwood Ave., Chicago

DERRIS PRODUCTS

Chipman Chem. Co., Bound Brook, N. J.
Derris, Inc., 79 Wall St., N. Y.
Enco Chem. Corp., 441 Lexington Ave., N. Y.
Greene Trading Co., 70 Pine St., N. Y.
Hammond Paint & Chem. Co., Beacon, N. Y.
J. L. Hopkins & Co., 220 Bway., N. Y.
Ketoid Chem. Co., 549 W. Washington, Chicago
Lenape Trading Co., 233 Broadway, N. Y.
McCormick & Co., Baltimore, Md.
Orbis Products Corp., 215 Pearl St., N. Y.
S. B. Penick & Co., 50 Church St., N. Y.

John Powell & Co., 1 Park Ave., N. Y.
R. J. Prentiss & Co., 110 William St., N. Y.
Frank B. Ross Co., 507-8th St., Hoboken, N. J.
Stauffer Chemical Co., 420 Lexington Ave., N. Y.
U. S. Industrial Chemicals, Inc., 60 E. 42nd St., N. Y. C.
Whitmire Research Corp., 339 S. Vandeventer, St. Louis

DEODORIZING BLOCKS AND CRYSTALS

Ampion Corp., 47-02 5th St., Long Island City, N. Y.
Antiseptol Co., 5524 Northwest Highway, Chicago
Chemical Compound Corp., 262 Huron St., Brooklyn
Chemical Mfg. & Dist. Co., Easton, Pa.
Chem. Service Co. of Balto., Howard & Fast Sts., Balto.
Chemical Supply Co., 2450 Canal Rd., Cleveland
Click Chemical Co., 41 Morrell St., Brooklyn
Chicago Sanitary Prod. Co., 3100 S. Throop St., Chicago
Clifton Chem. Co., 62 William St., N. Y.
Cole Laboratories, 22-19 37th Ave., L. I. City, N. Y.
Columbia Soap & Chem. Co., Inc., 324 Leavenworth St., San Francisco
Crystal Soap & Chem. Co., 6300 State Rd., Philadelphia
Crystal Labs, Inc., 21 W. Park Way, N. E., Pittsburgh
Davies-Young Soap Co., Dayton, O.
Delta Chemical Co., 4 Payson Ave., N. Y.
Eagle Soap Corp., Huntington, Ind.
Elkay Products Corp., 323 W. 16th St., N. Y.
Fitch Dustdown Co., 801 S. Howard St., Baltimore
Fuld Bros., 702 S. Wolfe St., Baltimore
Gaylord Chem. Co., 701 Woodswether Rd., Kansas City, Mo.
James Good, Inc., 2116 E. Susquehanna Ave., Phila.
Goulard & Olena, 140 Liberty St., N. Y.
Higley Chemical Co., Dubuque, Iowa
Hockwald Chemical Co., 135 Mississippi St., San Francisco
R. M. Hollingshead Corp., Camden, N. J.
Hubman Supply Co., 225 N. 4th St., Columbus, O.
Hysan Prods. Co., 932 W. 38th Place, Chicago
Imperial Prods. Co., 1600 Fountain St., Phila.
Industrial Labs., 17-19 W. Conway St., Baltimore

Depend on

DERRIS, INC.

ROTENONE PRODUCTS

TO FIT YOUR MOST EXACTING NEEDS

DERRIS AND CUBE

Powder, Resins, Extracts

SAMPLES ON REQUEST

DERRIS, INC.

79 WALL STREET

FACTORY AND LABORATORIES

NEW YORK 5, N. Y.

METUCHEN, N. J.

NEW and IMPROVED

SYNTHETIC ORGANIC DETERGENTS

by **MIRANOL**

ARE STANDARD FOR ALL INDUSTRIES



Two plants conveniently located in Milltown, New Jersey, and in Chicago, Illinois, to serve your needs efficiently and courteously. Our new and growing facilities now permit us to supply your needs with the best possible Synthetic Organic Detergents for:

Cosmetics

Paper

Textiles

Metal Working

Plating Industries

Ore Flotation

Paints

Agriculturals

Samples and Literature on Request

In Canada:

CHARLES ALBERT SMITH, Ltd.
123 Liberty St., Toronto 1, Que.
315 Youville Sq., Montreal, Ont.

For Export:

CALLAN, SIMON and NORTON, Inc.
21 West St.
New York 6, N. Y.

MIRANOL CHEMICAL COMPANY, Inc.

POST OFFICE BOX 118

Milltown 8-0755

MILLTOWN, N. J.

DEODORIZING BLOCKS (Contd.)

Jansen Soap & Chemical Co., 324 Leavenworth St., San Francisco, Calif.
 J. F. Kerns Chem. Prods., 2239 S. Michigan Ave., Chicago
 Kemiko Mfg. Co., 500 Chancellor Ave., Irvington, N. J.
 Kleenaire KemiKils, 2227 24th St., Detroit
 Klix Chem. Co., 2460 Third St., San Francisco
 Koppers Co., White Tar Div., Kearny, N. J.
 Lewis Soap & Chem. Co., 383 Seventh St., Oakland, Calif.
 Midland Labs., Dubuque, Iowa
 North Coast Soap & Chem. Wks., Seattle, Wash.
 Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
 Puritan Chemical Co., Atlanta, Ga.
 The Puro Co., 2801 Locust St., St. Louis
 Theo. B. Robertson Prods., Co., 700 W. Division St., Chicago
 Rochester Germicide Co., Rochester, N. Y.
 Selig Co., 336 Marietta St., Atlanta, Ga.
 Solshine Mfg. Co., 423-2nd St., Fall River, Mass.
 Trio Chem. Wks., 341 Scholes St., Bklyn.
 J. A. Tumbler Labs., 423 Hanover St., Baltimore
 Uncle Sam Chem. Co., 573 W. 131st St., N. Y.
 U. S. Sanitary Specialties Corp., 435 S. Western Ave., Chicago
 Victory Chemical Co., 148 Fairmount Ave., Phila.
 G. H. Wood & Co., Toronto, Canada
 York Chemical Co., 23 Dean St., Bklyn.

DETERGENTS (Alkaline Salt Compounds)

American Cyanamid & Chemical Corp., 30 Rockefeller Plaza, N. Y.
 American Soap & Washoline Co., Cohoes, N. Y.
 Ampion Corp., 47-02 5th St., L. I. City
 Antiseptol Co., 5524 Northwest Highway, Chicago
 Armour & Co., 1355 W. 31st St., Chicago
 Blockson Chemical Co., Joliet, Ill.
 Boston Chemical Industries, 64 E. Brookline St., Boston
 Calgon, Inc., Pittsburgh

Candy & Co., 2515 W. 35th St., Chicago
 Chemical Mfg. & Dist. Co., Easton, Pa.
 Chem. Service Co. of Balto., Howard & Fast Sts., Balto.
 Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
 Cowles Detergent Co., 7016 Euclid Ave., Cleveland
 Curran Corp., Lawrence, Mass.
 Delta Chem. Co., 4 Payson Ave., N. Y.
 Diamond Alkali Co., Standard Silicate Div., 535 Smithfield St., Pittsburgh
 Diversey Corp., 53 W. Jackson Blvd., Chicago
 E. F. Drew & Co., 15 E. 26th St., N. Y.
 DuBois Soap Co., Cincinnati
 E. I. Du Pont de Nemours & Co., Wilmington, Dela.
 Economics Laboratory, Globe Bldg., St. Paul
 Fuld Bros., 702 S. Wolfe St., Baltimore
 Gaskill Products, 9 S. Letitia St., Phila.
 Gaylord Chem. Co., 701 Woodswether Rd., Kansas City
 James Good, Inc., 2116 E. Susquehanna Ave., Phila.
 Hercules Powder Co., Wilmington, Dela.
 Higley Chemical Co., Dubuque, Iowa
 Hockwald Chem. Co., 135 Mississippi St., San Francisco, Calif.
 Hysan Prods. Co., 932 W. 35th Place, Chicago
 Imperial Prods. Co., 1600 Fountain St., Phila.
 Kamen Soap Prods. Co., Woolworth Bldg., N. Y.
 Los Angeles Soap Co., 617 E. 1st St., Los Angeles
 A. R. Maas Chem. Co., South Gate, Calif.
 MacKenzie Laboratories, Front and Yarnall Sts., Chester, Pa.
 Mathieson Alkali Works, 60 E. 42nd St., N. Y.
 Miranol Chemical Co., P. O. Box 118, Milltown, N. J.
 Monsanto Chemical Co., 1700 S. 2nd St., St. Louis
 Napthole, Inc., 15 E. 26th St., New York
 Nopco Chemical Co., Harrison, N. J.
 Oil States Pet. Co., 233 Broadway, N. Y.
 Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
 Penna. Salt Mfg. Co., 1000 Widener Bldg., Phila.
 Philadelphia Quartz Co., 125 S. 3rd St., Philadelphia
 Pittsburgh Plate Glass Co., Columbia Chemical Div., Grant Bldg., Pittsburgh
 Port Huron Detergent Co., Port Huron, Mich.
 Rulon Laboratories, Bryant Bldg., Kansas City



Thinking about
surface-active agents?



Find the MICHELENE*
surface-active agent for
your job on this chart:

	chemical processing	cosmetics	dairy & farm	food processing	household	industrial maintenance	institutions	laundry & dry cleaning	soap	textile processing
cleaning			DS	DS	DCA	DCA	DMA	DCA	DCA	DS
wetting		W	DS	DLC	DMA	DCA	DLC	DMA	DLC	DS
foaming		DS	DS	DS	DMA		DS	DMA	DMA	DS
penetrating		DR	DS	DS	DR					DR
emulsifying		DS	DS	DS	DS		DLC	DMA	DMA	DS
dispersing		DR	DS	DS						DR
reducing tension		DR	DLC							DLC



Write for full data on chemical
specialties, including Micheline
textile softeners and sulfona-
tion bases, and
cetyl, oleyl
and stearyl *Cachalot* fatty
alcohols



MICHEL AND COMPANY, INC.
90 BROAD STREET • NEW YORK 4, N. Y.

*Reg. Trade Name.

GOOD WILL means something
after all. Quality promotes GOOD WILL
1 8 6 3 - 1 9 4 8

QUALITY . . . TIME TESTED

SOAP POWDERS

Why not get Spray Process Soap Powders?
They cost no more and are BETTER.

Spray Process manufacture does this for YOU:

INSURES—Uniformity of the finished material.

ASSURES—Standardization of performance and quality.

RESULTS—Increases customer satisfaction and repeat business.

ALL Stevens Powders are Spray Processed, and subject to careful laboratory control designed to increase YOUR Soap Powder business.

DISHWASHING COMPOUND

STESCO DISHWASHING COMPOUND — A superior compound scientifically formulated for machine use. Manufactured by FUSING the component alkalis rather than mechanically mixing them insures absolute uniformity of the compound and even dispersion of its detergent action.

Dishwashing Compounds for Hand or Machine

WHOLESALE ONLY

STEVENS SOAP CORPORATION

194-216 Sullivan St., Erie Basin

Brooklyn, N. Y.

DETERGENTS (Alkaline Salt Compounds) (Cont.)

Rumford Chem. Wks., Rumford, R. I.
Sanitary Soap Co., 104 Railroad Ave., Patterson, N. J.
Skotch Prods. Corp., 2710 Detroit Ave., Cleveland
Stevens Soap Corp., 200 Sullivan St., Brooklyn, N. Y.
Sergeant Chem. Co., 7 Dey St., N. Y.
E. B. Snyder Labs., 2137 E. Harold St., Philadelphia
Solvay Sales Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
John T. Stanley Co., 642 W. 30th St., N. Y.
Swift & Co., Chicago
Superior Soap Corp., 121 Nostrand Ave., Brooklyn
Texas Soap Mfg. Corp., 4905 Calhoun Rd., Houston
J. A. Tumbler Labs., 423 Hanover St., Baltimore
Jos. Turner & Co., Ridgefield, N. J.
Ultra Chem. Wks., 2 Wood St., Paterson, N. J.
U. S. Sanitary Spec. Corp., 435 S. Western Ave., Chicago
Westvaco Chlorine Prods. Co., 405 Lexington Ave., N. Y.
Welch, Holme & Clark Co., 439 West St., N. Y.
Wyandotte Chemical Corp., Wyandotte, Mich.

DETERGENTS, Synthetic (Non-soap) Raw Materials

Alrose Chem. Co., Box 1294, Providence, R. I.
American Cyanamid & Chemical Corp.,
30 Rockefeller Plaza, N. Y.
Antara Prods. Div., Gen. Aniline & Film Corp., 444 Madison Ave., N. Y.
Atlantic Refining Co., 260 S. Broad St., Phila.
Atlas Powder Co., Wilmington, Del.
Carbide & Carbon Chemicals Corp., 30 E. 42nd St., N. Y.
Carlstadt Chem. Co., Carlstadt, N. J.
E. F. Drew & Co., Weccoline Div., Boonton, N. J.
E. I. Du Pont de Nemours & Co., Inc., Wilmington, Del.
Emulsol Corp., 59 E. Madison St., Chicago
General Drug Co., 644 Pacific St., Brooklyn
General Dyestuff Corp., 435 Hudson St., N. Y.
Lehigh Chem. & Export Co., 55 Liberty St., N. Y.
Maywood Chem. Wks., Maywood, N. J.
Miranol Chemical Co., P. O. Box 118, Milltown, N. J.
M. Michel & Co., 90 Broad St., N. Y.
Monsanto Chemical Co., 1700 S. 2nd St., St. Louis
National Aniline Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Nopco Chem. Co., Harrison, N. J.
Oil States Petroleum Co., 233 Broadway, N. Y.
Oronite Chem. Co., 200 Bush St., San Francisco
Publicker Industries, 1429 Walnut St., Phila.
Riches-Nelson, Inc., 342 Madison Ave., N. Y.
Rohm & Haas Co., 222 W. Washington Sq., Phila.
Sharples Chemicals, Inc., 123 S. Broad St., Phila.
Solvay Sales Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
L. Sonneborn Sons, 88 Lexington Ave., N. Y.
Stanco Distributors, 216 W. 14th St., N. Y.
World Chem. Corp., 1819 Bdway, N. Y.

DETERGENTS, Synthetic Organic, (Non-soap)

Alrose Chem. Co., Box 1294, Providence, R. I.
American Cyanamid & Chem. Corp., 30 Rockefeller Plaza, N. Y.
Antara Prods. Div., Gen. Aniline & Film Corp., 444 Madison Ave., N. Y.
Armour & Co., 1355 W. 31st St., Chicago
Atlantic Refining Co., 260 S. Broad St., Phila.
Barton Chem. Co., 3907 S. Langley Ave., Chicago
Carbide & Carbon Chem. Corp., 30 E. 42nd St., N. Y.
Carlstadt Chem. Co., Carlstadt, N. J.
Chem. Mfg. & Dist. Co., Easton, Pa.
Colgate-Palmolive-Peet Co., Jersey City, N. J.
Commercial Solvents Corp., 17 E. 42nd St., N. Y.
Diamond Alkali Co., 535 Smithfield St., Pittsburgh
E. I. Du Pont de Nemours & Co., Wilmington, Del.
Emulsol Corp., 59 E. Madison St., Chicago
Fairfield Labs., Inc., 417 Cleveland Ave., Plainfield, N. J.
Fine Organics, Inc., 211 E. 19th St., N. Y.
Fuld Bros., 702 S. Wolfe St., Baltimore
Gaylord Chem. Co., 701 Woodswether Rd., Kansas City, Mo.
General Drug Co., 644 Pacific St., Brooklyn
General Dyestuff Corp., 435 Hudson St., N. Y.
Glyco Products Co., 26 Court St., Brooklyn, N. Y.
James Good, Inc., 2116 E. Susquehanna Ave., Phila.

When you think of SURFACE-ACTIVE AGENTS

remember



FATTY AMIDE CONDENSATES
ALKYL NAPHTHALENE SULFONATES
MODIFIED ALCOHOL SULFATES
POLYOXYALKYLENE ESTERS
ALKYL PHENYL SULFONATES
FATTY MONOGLYCERIDES
ALKYL IMIDAZOLINES
ALKYL IMIDAZOLINIUM
CHLORIDES

ALROSE

CHEMICAL COMPANY

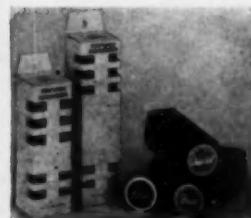
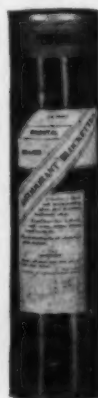
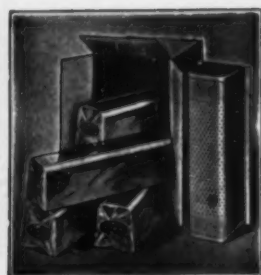
manufacturing and research chemists

PROVIDENCE 1, R. I.

Wetting agents emulsifiers penetrants
foamers dispersants softeners
detergents defoamers sequestrants
textile chemicals industrial specialties
quaternary ammonium compounds

MANUFACTURER *exclusively for the* **JOBBER**

WAXES



WAXES



INSECTICIDES that KILL



SOAPS



WE
SPECIALIZE
IN
PRIVATE
BRAND
PACKING
FOR THE
JOBBER

DISINFECTANTS



DEODORANTS



POLISHES



WRITE FOR OUR DESCRIPTIVE CATALOGUE AND PRICE LIST

UNCLE SAM CHEMICAL CO., INC.
575 West 131st Street Established 1920 New York 27, N. Y.

DETERGENTS (Synthetic Organic) (Non-Soap) (Cont.)

Hercules Powder Co., Wilmington, Del.
Griffin Chem. Co., 1000 16th St., San Francisco
Arnold Hoffman Co., Providence, R. I.
E. F. Houghton & Co., 303 W. Lehigh Ave., Phila.
Imperial Prods. Co., 1600 Fountain St., Phila.
Kamen Soap Products Co., Woolworth Bldg., N. Y.
Koppers Co., Koppers Bldg., Pittsburgh, Pa.
Lehigh Chem. & Export Co., 55 Liberty St., N. Y.
Mackenzie Laboratories, Front & Yarnall Sts., Chester, Pennsylvania
Maywood Chemical Works, Maywood, N. J.
M. Michel & Co., 90 Broad St., N. Y.
Miranol Chemical Co., Milltown, N. J.
Monsanto Chemical Co., 1700 S. 2nd St., St. Louis
National Aniline Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Nopco Chemical Co., Harrison, N. J.
Oil States Pet. Co., 233 Broadway, N. Y.
Oronite Chemical Co., 200 Bush St., San Francisco
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Penna. Salt Mfg. Co., Widener Bldg., Phila.
Rex-Cleanwall Corp., Brazil, Ind.
Richards Sales Corp., Jersey City, N. J.
Sandoz Chem. Wks., 61 Van Dam St., N. Y.
Sanitary Soap Co., 104 Railroad Ave., Paterson, N. J.
Seaboard Distributors, 60 Park Pl., Newark, N. J.
Sharples Chemicals, Inc., 123 S. Broad St., Phila.
Skotch Prods. Corp., 2710 Detroit Ave., Cleveland
E. B. Snyder Labs., 2137 E. Harold St., Philadelphia
Solvay Sales Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
L. Sonneborn Sons, 88 Lexington Ave., N. Y.
Ultra Chem. Wks., 2 Wood St., Paterson, N. J.
Universal Chlorinator Co., 3418 W. Pico Blvd., Los Angeles
Van Dyk & Co., Belleville, N. J.
James Varley & Sons, 1200 Switzer Ave., St. Louis
G. H. Wood & Co., Toronto, Ont., Canada
Welch, Holme & Clark Co., 439 West St., N. Y.

DIATOMACEOUS EARTH, (see Bleaching Earths)

DIES (see Soap Dies)

DIETHANOLAMINE (see Ethanolamine)

DIFFUSERS (Steam and Air)

Electric Sprayit Co., Sheboygan, Wisc.
Fumeral Co., Racine, Wisc.
Mystic Products Co., 417 No. 5th St., Minneapolis

DIPHENYL OXIDE (see Aromatic Chemicals)

DISH WASHING COMPOUND DISPENSERS

Economics Laboratory, Inc., 622 Globe Bldg., St. Paul
Fuld Bros., 702 S. Wolfe St., Baltimore
Hockwald Chem. Co., 135 Mississippi St., San Francisco
Hysan Prods. Co., 932 W. 38th Place, Chicago
Independent Specialties, 152 W. 75th St., Chicago
MacKenzie Laboratories, Front & Yarnall Sts., Chester, Pa.
Mathieson Chemical Co., 60 E. 42nd St., N. Y.
Theo. B. Robertson Prods. Co., 700 W. Division St., Chicago
John T. Stanley Co., 642 W. 30th St., N. Y.
V. C. Products Co., Beury Bldg., Philadelphia (Powders)

DISH WASHING COMPOUNDS (see Cleaning Compounds, Dry)

DISINFECTANTS, CHLORINATED

Ampion Corp., 42-02 5th St., Long Island City, N. Y.
Banner Chem. Prods. Co., 60 Elm St., Newark, N. J.
Barton Chemical Co., 3909 S. Langley Ave., Chicago
Chemical Compounding Corp., 262 Huron St., Brooklyn
Chem. Service Co. of Balto., Howard & West Sts., Balto.

KREOLE PINE

Cleans, Deodorizes, Disinfects

A little Kreole Pine added to water turns it into a milky white soap solution that does three tedious jobs at the same time. It cleans, deodorizes and disinfects . . . Makes cleaning easier, because it glides the dirt away, leaves any surface, sweet smelling, hospital clean.

MADE BY MANHATTAN KREOLE PRODUCTS, INC.,
MANUFACTURERS OF DISINFECTANTS, INSECTICIDES,
POLISHES, CLEANERS AND DEODORANTS SINCE 1889.

Because of their attractive packaging and liberal mark-up, MANHATTAN KREOLE products mean more profit for wholesalers, jobbers. Special low prices in drum lots. Catalogue and price list furnished on request.



Manhattan Kreole Products, Inc.
172-176 NORTH 10th STREET, BROOKLYN 11, NEW YORK. TEL. EVERGREEN 8-9740-9741

DISINFECTANTS, CHLORINE (Contd.)

Chemical Supply Co., Plymouth Bldg., Cleveland
Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
 Churchill Mfg. Co., Galesburg, Ill.
 Clifton Chemical Co., 62 William St., N. Y.
 Cole Laboratories, 22-19 37th Ave., L. I. City, N. Y.
Eagle Soap Corp., Huntington, Ind.
 Fuld Bros., 702 S. Wolfe St., Baltimore
 Goulard & Olena, Inc., 140 Liberty St., N. Y.
 Higley Chemical Co., Dubuque, Iowa
 Hockwald Chem. Co., 135 Mississippi St., San Francisco, Calif.
 Arnold Hoffman Co., Providence, R. I.
 R. M. Hollingshead Corp., Camden, N. J.
 Hooker Electrochemical Co., Niagara Falls, N. Y.
 Hunt Mfg. Co., Lisbon Rd., Cleveland
 Hysan Products Co., 932 W. 38th Place, Chicago.
 Imperial Prods. Co., 1600 Fountain St., Phila.
 J. F. Kerns Chem. Prods., 2239 S. Michigan Ave., Chicago
 Mathieson Chemical Corp., 60 E. 42nd St., N. Y.
 McLaughlin Gormley King Co., Minneapolis, Minn.
 Midland Labs, Dubuque, Iowa
 Monsanto Chemical Co., 1700 S. 2nd St., St. Louis
 North Coast Soap & Chem. Works, Seattle, Wash.
 Penna. Salt Mfg. Co., 1000 Widener Bldg., Phila.
 Puritan Chem. Co., Atlanta, Ga.
 Theo. B. Robertson Prods. Co., 700 W. Division St., Chicago
 Rochester Sanitary Prods. Co., 874 Seward St., Rochester, N. Y.
 Rulon Laboratories, Bryant Bldg., Kansas City
 Sanitary Soap Co., 104 Railroad Ave., Paterson, N. J.
 Sherwin-Williams Co., 601 Canal Rd., Cleveland
 Thompson-Hayward Chemical Co., Kansas City, Mo.
 Trio Chem. Wks., 341 Scholes St., Bklyn.
 J. A. Tumbler Labs., 423 Hanover St., Baltimore
 U. S. Sanitary Specialties Corp., 435 S. Western Ave., Chicago
 Universal Chlorinator Co., 3418 W. Pico Blvd., Los Angeles
 Victory Chem. Co., 148 Fairmount Ave., Phila.
 James Varley & Sons, 1200 Switzer Ave., St. Louis
 G. H. Wood & Co., Toronto, Ont., Canada

DISINFECTANTS, QUATERNARY AMMONIUM (See also Quaternary Ammonium Compounds)

Alrose Chem. Co., Box 1294, Providence, R. I.
 Baird & McGuire, Inc., Holbrook, Mass.
 Chemical Mfg. & Dist. Co., Easton, Pa.
 Chem. Service Co. of Balto., Howard & West Sts., Balto.
 Carlstadt Chem. Co., Carlstadt, N. J.
 Chemical Supply Co., Plymouth Bldg., Cleveland
 Emulsol Corp., 59 E. Madison St., Chicago
 Fairfield Labs., Inc., 417 Cleveland Ave., Plainfield, N. J.
 Fine Organics, Inc., 211 E. 19th St., N. Y.
 Fuld Bros., 702 S. Wolfe St., Baltimore
 Gaylord Chem. Co., 701 Woodswether Rd., Kansas City, Mo.
 Hysan Products Co., 932 W. 38th Place, Chicago.
 Imperial Prods. Co., 1600 Fountain St., Phila.
 J. F. Kerns Chem. Prods., 2239 S. Michigan Ave., Chicago
 Lorenz Chem. Co., 135 N. 32nd Ave., Omaha
 Lynwood Co., 6115 S. Kedzie, Chicago
 Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
 Retardex Co., 1 Hanson Pl., Brooklyn
 Rochester Germicide Co., Rochester, N. Y.
 Rohm & Haas Co., 222 W. Washington Sq., Philadelphia
 Theo. Ross Associates, 835 W. Olympic Blvd., Los Angeles
 E. B. Snyder Labs., 2137 E. Harold St., Philadelphia
 Tech Soap Mfg. Co., 125 W. 46th Pl., Chicago
 Uncle Sam Chem. Co., 573 W. 131st St., N. Y.
 Universal Chlorinator Co., 3418 W. Pico Blvd., Los Angeles
 James Varley & Sons, 1200 Switzer Ave., St. Louis
 G. H. Wood & Co., Toronto, Canada

DISINFECTANTS, COAL TAR and PINE OIL

Ampion Corp., 47-02 5th St., Long Island City, N. Y.
 Antiseptol Co., 5524 Northwest Highway, Chicago

Baird & McGuire, Inc., Holbrook, Mass.
 Banner Chem. Prods. Corp., 60 Elm St., Newark, N. J.
 Boston Chemical Industries, 64 E. Brookline St., Boston
 Bri-Test Prods. Corp., 845 E. 138th St., N. Y.
 Buckingham Wax Co., Van Dam St. & Borden Ave., L. I. City, N. Y.
 Samuel Cabot, Inc., 141 Milk St., Boston
 Chemical Compounding Corp., 262 Huron St., Brooklyn
 Chemical Mfg. & Dist. Co., Easton, Pa.
 Chemical Service Co., Baltimore, Md.
 Chemical Supply Co., Plymouth Bldg., Cleveland
Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
 Clifton Chemical Co., 62 William St., N. Y.
 Cole Laboratories, 22-19 37th Ave., L. I. City, N. Y.
 Corn King Co., Cedar Rapids, Ia.
 Wm. Cooper & Nephews, 1909 Clifton Ave., Chicago
 Creco Co., Inc., Creco Bldg., Long Island City, N. Y.
 Crosby Chemicals, Inc., De Ridder, La.
 Crystal Soap & Chem. Co., 6300 State Rd., Phila.
Davies-Young Soap Co., Dayton, O.
 Delta Chemical Co., 4 Payson Ave., N. Y.
Eagle Soap Corp., Huntington, Ind.
 Elkay Products Co., 323 W. 16th St., N. Y.
 Emulsol Corp., 59 E. Madison St., Chicago
 Fergusson Laboratories, Drexel Bldg., Phila.
Fuld Bros., 702 S. Wolfe St., Baltimore
 Gaskill Prods., 9 S. Letitia St., Phila.
 Gaylord Chem. Co., 701 Woodswether Rd., Kansas City, Mo.
 James Good, Inc., 2116 E. Susquehanna Ave., Phila.
 Haag Laboratories, Inc., 140th and Seeley Ave., Blue Island, Ill.
 Harley Soap Co., Pierce & Orthodox Sts., Phila.
 Higley Chem. Co., Dubuque, Iowa
 Hockwald Chem. Co., 135 Mississippi St., San Francisco
 Arnold Hoffman Co., Providence, R. I.
 R. M. Hollingshead Corp., Camden, N. J.
 James Huggins & Son, 239 Medford St., Malden, Mass.
 Hunt Mfg. Co., Lisbon Rd., Cleveland
 Hysan Products Co., 932 W. 38th Place, Chicago.
 Imperial Prods. Co., 1600 Fountain St., Phila.
 J. F. Kerns Chem. Prods., 2239 S. Michigan Ave., Chicago
 Klux Chem. Co., 2460 Third St., San Francisco
 Koppers Co., White Tar Div., Kearny, N. J.
 Manhattan Kreole Prods., 172 N. 10th St., Brooklyn
 Merck & Co., Rahway, N. J.
 Midland Labs., Dubuque, Iowa
 National Sawdust Co., 69 N. 6th St., Bklyn.
 Nopco Chemical Co., Harrison, N. J.
 N. Y. Soap Co., 258 Third St., Brooklyn
 Oil-Kraft, Inc., 3330 Beekman St., Cincinnati
 Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
 Puritan Chem. Co., Atlanta, Ga.
 Riverside Chem. Co., N. Tonawanda, N. Y.
 Theo. B. Robertson Prods. Co., 700 W. Division St., Chicago
 Rochester Germicide Co., Rochester, N. Y.
 Sanitary Soap Co., 104 Railroad Ave., Paterson, N. J.
 Sherwin-Williams Co., 601 Canal Rd., Cleveland, Ohio
 E. B. Snyder Labs., 2137 E. Harold St., Philadelphia
 Solshine Mfg. Co., 412-2nd St., Fall River, Mass.
 L. Sonneborn Sons, 88 Lexington Ave., N. Y.
John T. Stanley Co., 642 W. 30th St., N. Y.
 Superior Soap Corp., 121 Nostrand Ave., Brooklyn
 Tech. Soap Mfg. Co., 125 W. 46th Pl., Chicago
 Tesco Chem. Co., P. O. Box 4748, Atlanta
 Texas Soap Mfg. Corp., 4905 Calhoun Rd., Houston
 Texol Chem. Wks., 3 Winter St., Worcester, Mass. (Pine Oil only)
 Trio Chem. Wks., 34 Scholes St., Bklyn.
Uncle Sam Chem. Co., 573 W. 131st St., N. Y.
 U. S. Sanitary Spec. Corp., 435 S. Western Ave., Chicago
 Ultra Chem. Wks., 2 Wood St., Paterson, N. J.
 James Varley & Sons, 1200 Switzer Ave., St. Louis
 Vliet & Co., 638 Monroe St., Brooklyn
 T. F. Washburn Co., 2244 Elston Ave., Chicago
 West Disinfecting Co., Long Island City, N. Y.
 G. H. Wood & Co., Toronto, Canada
 York Chemical Co., 23 Dean St., Bklyn.

DISINFECTANTS, Synthetic

Alrose Chem. Co., Box 1294, Providence, R. I.
 Baird & McGuire, Inc., Holbrook, Mass.
 Carlstadt Chem. Co., Carlstadt, N. J.

DISINFECTANTS, SYNTHETIC (Contd.)

Chem. Mfg. & Dist. Co., Easton, Pa.
Chemical Service Co., Baltimore
Chemical Supply Co., Plymouth Bldg., Cleveland
Emulsol Corp., 59 E. Madison St., Chicago
Fuld Bros., 702 S. Wolfe St., Baltimore
Fine Organics, Inc., 211 1 19th St., N. Y.
Higley Chem. Co., Dubuque, Ia.
R. M. Hollingshead Corp., Camden, N. J.
Hysan Products Co., 932 W. 38th Place, Chicago.
Koppers Co., White Tar Div., Kearny, N. J.
Lynwood & Co., 6115 S. Kedzie, Chicago, Ill.
Miranol Chemical Co., P.O. Box 118, Milltown, N. J.
Monsanto Chem. Co., 1700 S. 2nd St., St. Louis
Peck's Prods. Co., 610 E. Clarence St., St. Louis
Puritan Chem. Co., Atlanta, Ga.
Rohm & Haas Co., 222 W. Washington Sq., Phila. 5
Sanitary Soap Co., 104 Railroad Ave., Paterson, N. J.
E. B. Snyder Labs., 2137 E. Harold St., Philadelphia
Texol Chem. Wks., 3 Winter St., Worcester, Mass.
U. S. Sanitary Specialties Corp., 435 S. Western Ave., Chicago
Uncle Sam Chem. Co., 575 W. 131st St., New York
James Varley & Sons, 1200 Switzer Ave., St. Louis
G. H. Wood & Co., Toronto, Canada

DISINFECTANTS, COEFFICIENT TESTS (see Laboratories)

DISPENSERS, LIQUID SOAP (see Soap Dispensers)

DISSEMINATORS, PERFUME (see Perfume Disseminators)

DOG REPELLENTS

Acme White Lead Co., Detroit
Ampion Corp., 4-88—47th Ave., Long Island City, N. Y.
California Spray-Chemical Corp., Richmond, Calif.
Chemical Supply Co., Plymouth Bldg., Cleveland
Fuld Bros., 702 S. Wolfe St., Baltimore
Hammond Paint & Chem. Co., Beacon, N. Y.
Hysan Products Co., 932 W. 38th Place, Chicago.
Imperial Prods. Co., 1600 Fountain St., Phila.
Midway Chemical Co., 5235 W. 65th St., Chicago
Sparhawk Co., Sparkill, N. Y.
Tobacco By-Products & Chem. Corp., Louisville, Ky.
Trio Chem. Wks., 341 Scholes St., Bklyn.
U. S. Sanitary Specialties Corp., 435 S. Western Ave., Chicago
Whitmire Res. Labs., 339 S. Vandeventer, St. Louis

DRAIN PIPE SOLVENT

Ampion Corp., 4-88—47th Ave., Long Island City, N. Y.
Antiseptol Co., 5524 Northwest Highway, Chicago
Cenol Co., 4250 N. Pulaski Ave., Chicago
Chemical Mfg. & Dist. Co., Easton, Pa.
Chem. Service Co. of Balto., Howard & West Sts., Balto.
Chemical Supply Co., Plymouth Bldg., Cleveland
Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
Churchill Mfg. Co., Galesburg, Ill.
Clifton Chemical Co., 62 William St., N. Y.
Cole Laboratories, 22-19—37th Ave., L. I. City, N. Y.
Creco Co., Inc., Creco Bldg., Long Island City, N. Y.
Delta Chemical Co., 4 Payson Ave., N. Y.
Elkay Products Co., 323 W. 16th St., N. Y.
Eagle Soap Corp., Huntington, Ind.
Fuld Bros., 702 S. Wolfe St., Baltimore
Gaylord Chem. Co., 701 Woodswether Rd., Kansas City, Mo.
James Good, Inc., 2116 E. Susquehanna Ave., Phila.
Goulard & Olena, Inc., 140 Liberty St., N. Y.
Hercules Chem. Co., 332 Canal St., New York
Higley Chemical Co., Dubuque, Ia.
Hockwald Chem. Co., 135 Mississippi St., San Francisco
Arnold Hoffman Co., Providence, R. I.
R. M. Hollingshead Corp., Camden, N. J.
Hubman Supply Co., 225 N. 4th St., Columbus, O.
Hull Co., 305 Washington St., Brooklyn
Hysan Products Co., 932 W. 38th Place, Chicago
Imperial Prods. Co., 1600 Fountain St., Phila.

Industrial Labs., 17-19 W. Conway St., Baltimore
Kemiko Mfg. Co., 500 Chancellor Ave., Irvington, N. J.
J. F. Kerns Chem. Prods., 2239 S. Michigan Ave., Chicago
Lewis Soap & Chem. Co., 2210 San Pablo Ave., Oakland, Calif.
Mechling Bros. Chemical Co., Line St. & Cooper's Creek, Camden
Midland Labs., Dubuque, Iowa
North Coast Chem. & Soap Wks., Seattle, Wash.
Palmer Products, Inc., Waukesha, Wisc.
Per-Mo Products Co., 3604 Woodland Ave., Kansas City, Mo.
Rex-Cleanwall Corp., Brazil, Ind.
Theo. B. Robertson Prods. Co., 700 W. Division St., Chicago
Rochester Germicide Co., Rochester, N. Y.
Solshine Mfg. Co., 44 Brookline St., Cambridge, Mass.
John Sunshine Chem. Co., 604 W. Lake St., Chicago
Superior Soap Corp., 121 Nostrand Ave., Brooklyn
J. A. Tumbler Labs., 423 Hanover St., Baltimore
U. S. Sanitary Specialties Corp., 435 S. Western Ave., Chicago

DRIP MACHINES

Ampion Corp., 47-02 5th St., Long Island City, N. Y.
Chem. Mfg. & Dist. Co., Easton, Pa.
Clifton Chemical Co., 62 William St., N. Y.
Eagle Soap Corp., Huntington, Ind.
Fuld Bros., 702 S. Wolfe St., Baltimore
Garnet Chem. Corp., 911 N. Lumber St., Allentown, Pa.
Hockwald Chem. Co., 135 Mississippi St., San Francisco
Hysan Products Co., 932 W. 38th Place, Chicago.
Rochester Germicide Co., 16 Downing Pl., Rochester.
Geo. B. Robbins Dis. Co., 42 Charlton St., Boston
Uncle Sam Chem. Co., 573 W. 131st St., N. Y.
U. S. Sanitary Specialties Corp., 435 S. Western Ave., Chicago
West Disinfecting Co., Long Island City, N. Y.
G. H. Wood & Co., Toronto, Canada

DRUM FILLING MACHINERY (see Filling Machinery, Drums)

DRUM WASHERS (see Washing Machinery, Drums)

DRUMS, STEEL (See Barrels, Steel)

DRY CLEANING SOAPS

Alrose Chem. Co., Box 1294, Providence, R. I.
Ampion Corp., 4-88—47th Ave., Long Island City, N. Y.
Armour & Co., 1355 W. 31st St., Chicago
Antara Prods. Div., Gen. Aniline & Film Corp., 444 Madison Ave., N. Y.
Baums Castorine Co., 200 Mathew St., Rome, N. Y.
Beach Soap Co., Lawrence, Mass.
Chemical Mfg. & Dist. Co., Easton, Pa.
Chem. Service Co. of Balto., Howard & West Sts., Balto.
Crystal Soap & Chem. Co., 6300 State Rd., Philadelphia
Davies-Young Soap Co., Dayton, O.
Dixo Co., 235 River Dr., Garfield, N. J.
Eagle Soap Corp., Huntington, Ind.
J. Evanson & Sons, Del & Penn Sts., Camden, N. J.
Fuld Bros., 702 S. Wolfe St., Baltimore
Haag Laboratories, Inc., 140th and Seeley Ave., Blue Island, Ill.
Harley Soap Co., Pierce and Orthodox Sts., Phila.
Hockwald Chem. Co., 135 Mississippi St., San Francisco
Hysan Prods. Co., 932 W. 38th Place, Chicago
H. Kohnstamm & Co., 91 Park Pl., N. Y.
Lorenz Chem. Co., 135 N. 32nd Ave., Omaha
Los Angeles Soap Co., 617 E. 1st St., Los Angeles
Midland Chem. Labs., Dubuque, Ia.
Nopco Chemical Co., Harrison, N. J.
North Coast Chem. & Soap Wks., Seattle, Wash.
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Puritan Soap Co., 573 Lyell Ave., Rochester, N. Y.
Richards Sales Corp., Warren & Morris Sts., Jersey City, N. J.
Riverside Mfg. Co., 4919 Conn St., St. Louis

Sargent's latest . . . **SOAP CHIP DRYER**



YOU will be interested in seeing two views of a recent installation of the latest SARGENT Dryer and Chilling Roll as set up and operating.

- Our engineers have developed a Roll and Dryer that delivers just what the Trade demands . . . extremely thin, smooth chips!
- The drives are of the variable speed control type. Designed for compactness and accessibility. The unit requires only the minimum of steam and power.
- Write to SARGENT today for complete information on this new machine.

C. G. SARGENT'S SONS CORPORATION • GRANITEVILLE, MASSACHUSETTS

DRY CLEANING SOAPS (Contd.)

John T. Stanley Co., 642 W. 30th St., N. Y.
R. R. Street & Co., 561 W. Monroe St., Chicago
Swift & Co., Chicago
Texas Soap Mfg. Corp., 4905 Calhoun, Houston
J. A. Tumbler Labs., 423 Hanover St., Baltimore
Ultra Chem. Wks., Inc., 2 Wood St., Paterson, N. J.
U. S. Sanitary Specialties Corp., 435 S. Western Ave.
Warren Soap Mfg. Co., 51 Waverly St., Cambridge, Mass.
M. Werk Co., Cincinnati, O.
G. H. Wood & Co., Toronto, Ont., Canada

DUST COLLECTORS

Cyclone Blow Pipe Co., 2552 W. 21st St., Chicago
Dust Filter Co., 160 N. La Salle St., Chicago
Federal Classifier Systems, Inc., 127 N. Dearborn St., Chicago
Lamson Corporation, Syracuse, New York
Multi-Clean Prods., 2277 Ford Pkway., St. Paul
Owens-Corning-Fiberglas Corp., Toledo, Ohio
Pangborn Corp., 10 Pangborn Blvd., Hagerstown, Md.
Pulverizing Machine Company, Summit, New Jersey
Sprayer Corp. of America, 5100 N. Ravenswood Ave., Chicago
W. W. Sly Mfg. Company, Cleveland, Ohio
Torit Mfg. Co., 8301 S. Vernon Ave., Chicago
Western Precipitation Corp., Los Angeles, California

DUST PANS

A. Kreamer, Inc., 307 Kent Ave., Brooklyn
F. H. Lawson Co., Cincinnati
National Can Corp., 110 E. 42nd St., N. Y.
Palmer Fixture Co., Waukesha, Wis.
H. K. Porter Co., 49th & Harrison Sts., Pittsburgh
White Mop Wringer Co., Fultonville, N. Y.

DUSTERS (Wool, Feather, Etc., for Cleaning)

American Standard Mfg. Co., 2509 S. Green St., Chicago
Golden Star Polish Mfg. Co., 2901 E. 13th St., Kansas City, Mo.
Hoag Duster Co., 200 Church St., N. Y.
H. D. Hudson Mfg. Co., 589 E. Illinois St., Chicago
Illinois Duster & Brush Co., 1944 Webster Ave., Chicago
Rubon Woodfinishing & Prods. Co., 500 W. 7th St., Kansas City, Mo.
P. R. Schuman Duster Co., 65 E. 53rd St., Brooklyn
Tu-way Products Co., 1423 Franklin St., Detroit
P. Wohl & Sons, 85 Bayard St., N. Y.

DUSTERS (for insecticides) (See Bellows and Sprayers)

DRYERS (Continuous for CHIP SOAPS)

Houchin Machinery Co., Hawthorne, N. J.
Proctor & Schwartz, 7th St. & Tabor Rd., Philadelphia
C. G. Sargent's Sons, Graniteville, Mass.

DRYING MACHINERY (General)

C. O. Bartlett & Snow Co., Cleveland
Buckeye Dryer Co., 131 W. Lake St., Chicago
Buffalo Forge Co., 490 Broadway, Buffalo, N. Y.
Buffalo Foundry & Machine Co., Buffalo, N. Y.
Consolidated Prods. Co., 15 Park Row, N. Y. (Used)
Drying Systems, Inc., 1800 Foster Ave., Chicago
Ellis Dryer Co., 2444 N. Pulaski Ave., Chicago
B. F. Gump Co., 431 S. Clinton St., Chicago
Houchin Machinery Co., Hawthorne, N. J.
Lancaster Iron Works, Lancaster, Pa.
J. M. Lehmann Co., Lyndhurst, N. J.
Louisville Drying Equipment Co., Louisville, Ky.
Newman Tallow & Soap Machy. Co., 1051 W. 35th St., Chicago (Used)

Chemicals for Agriculture..

AGRICULTURAL insecticides and fungicides, stock dips and sprays, dairy farm chemicals, fumigants, weed control chemicals, soil and seed treating chemicals, rodenticides, fertilizers... their processing, marketing and application... are the subjects of specialized attention in this monthly trade magazine covering a widely important and growing field... a publication backed by 25 years' experience in and around the field of chemicals for agriculture... a practical magazine for the trade... ask to see a sample copy of

AGRICULTURAL CHEMICALS

254 WEST 31st STREET
NEW YORK 1, N. Y.



Uniform soap drying is the result of two important factors . . . first, uniform ribbons and second, carefully controlled drying. There is no chance for uniform drying—even in the most carefully designed dryer—if ribbons coming to the dryer vary in thickness. Neither is there the slightest chance for uniform drying—of even the most carefully formed ribbons—unless conditions within the dryer are accurately controlled. Ribbon uniformity is achieved in direct proportion to the degree of precision with which the chilling roll is engineered and built. Proper drying is brought about only to the extent that there is a uniform circulation of heated air, at the right temperature to suit the character-

istics of the particular soap, for the correct drying time. That is why the Proctor chilling machine is designed and built to such precision specifications. Ribbons formed by this chilling machine are *uniform* in every degree. In the dryer—which combines with this chilling machine to form the Proctor automatic flake soap system—uniform circulation of heated air is maintained through the bed of soap and across the entire width of the conveyors. The speed at which the conveyors move and the temperature within the dryer can be regulated to suit the characteristics of the type of soap being handled. Combining the work done by the Proctor chilling machine and the dryer, it is easy to see the reasons behind the dependable performance of this Proctor system. Write today for the latest booklet on this system.

PROCTOR & SCHWARTZ, INC.
PHILADELPHIA 20, P.A.

DRYING MACHINERY, General (Contd.)

Oven Equipment Co., New Haven, Conn.
Philadelphia Drying Mach. Co., Philadelphia
H. K. Porter Co., Oliver Bldg., Pittsburgh
Proctor & Schwartz, 7th St. & Tabor Rd., Philadelphia
C. G. Sargent's Sons Corp., Graniteville, Mass.
Ernest Scott & Co., Fall River, Mass.
Stein Equipment Co., 90 West St., N. Y. (Used)
F. J. Stokes Machine Co., Philadelphia, Pa.
Struthers-Wells Co., Warren, Pa.
B. F. Sturtevant Co., Hyde Park, Boston

EMULSIFYING AGENTS

Alrose Chem. Co., Box 1294, Providence, R. I.
American Colloid Co., 363 W. Superior St., Chicago
Antara Prods., Div. Gen. Aniline & Film Corp., 444
Madison Ave., N. Y.
Arabol Mfg. Co., 110 E. 42nd St., N. Y.
Armour & Co., 1355 W. 31st St., Chicago
Atlantic Refining Co., 260 S. Broad St., Philadelphia
Atlas Powder Co., Wilmington, Del.
Borne Scrymser Co., 632 S. Front St., Elizabeth, N. J.
Carbide & Carbon Chemicals Corp., 30 E. 42nd St., N. Y.
Commercial Solvents Corp., 17 E. 42nd St., N. Y.
E. I. Du Pont de Nemours & Co., Wilmington, Del.
Emery Industries, Inc., 4300 Carew Tower, Cincinnati
Emulsol Corp., 59 E. Madison St., Chicago
General Drug Co., 644 Pacific St., Brooklyn
General Dyestuff Corp., 435 Hudson St., N. Y.
Glyco Products Co., 26 Court St., Bklyn.
R. W. Greeff & Co., 10 Rockefeller Plaza, N. Y.
Griffin Chem. Co., 1000—16th St., San Francisco
W. C. Hardesty Co., 41 E. 42nd St., N. Y.
Hercules Powder Co., Wilmington, Del.
Hull Co., 305 Washington St., Brooklyn
Innis, Speiden & Co., 117 Liberty St., N. Y.
Kessler Chem. Co., 7272 State Rd., Phila.
Mackenzie Laboratories, Front & Yarnall Sts., Chester,
Pa.

N. I. Malmstrom & Co., 147 Lombardy St., Bklyn.
M. Michel & Co., 90 Broad St., N. Y.
Miranol Chemical Co., P. O. Box 118, Milltown, N. J.
Maywood Chemical Works, Maywood, N. J.
Monsanto Chem. Co., 1700 S. 2nd St., St. Louis
Nopco Chemical Co., Harrison, N. J.
Natural Minerals Co., 108 W. 6th St., Los Angeles
Orbis Products Corp., 215 Pearl St., N. Y.
Oronite Chem. Co., 200 Bush St., San Francisco
S. B. Penick & Co., 50 Church St., N. Y.
Pennsylvania Refining Co., Butler, Pa.
Petroleum Specialties, Inc., 400 Madison Ave., N. Y.
Philadelphia Quartz Co., 125 S. 3rd St., Phila.
Pylam Products Co., 799 Greenwich St., N. Y.
Richards Chem. Works, Warren and Morris Sts., Jersey
City, N. J.
Robinson Wagner Co., 110 E. 42nd St., N. Y.
Rohm & Haas Co., 222 W. Washington Sq., Phila.
Rumford Chem. Wks., Rumford, R. I.
Sandoz Chemical Works, Inc., 61 Van Dam St., N. Y.
F. E. Schundler & Co., Joliet, Ill.
Seaboard Distributors, 60 Park Pl., Newark, N. J.
L. Sonneborn Sons, 88 Lexington Ave., N. Y.
Stanco Distributors, Inc., 216 W. 14th St., N. Y.
A. E. Starkie Co., 5461 W. Division St., Chicago
Van Dyk Co., Belleville, N. J.
Ultra Chem. Wks., 2 Wood St., Paterson, N. J.
R. T. Vanderbilt Co., 230 Park Ave., N. Y.
Welch, Holme & Clark Co., 439 West St., N. Y.
Woburn Chemical Corp., Harrison, N. J.
Jacques Wolfe & Co., Passaic, N. J.

ESSENTIAL OILS

Albert Albek, Inc., 511 S. Fairfax, Los Angeles
Allondon, Inc., 66 Dey St., N. Y.
Van Ameringen-Haebler, Inc., 315—4th Ave., N. Y.
Aromatic Products, Inc., 15 E. 30th St., N. Y.
Bendix Chem. Corp., 420 Lexington Ave., N. Y.
W. J. Bush & Co., 11 E. 38th St., N. Y.
Bush Aromatics, Inc., 136 Liberty St., N. Y.
Centflor Mfg. Co., 6 Varick St., N. Y.

THE VANDERBILT LABORATORIES

EAST NORWALK, CONNECTICUT



Veegum

Magnesium
Aluminum Silicate

VEEGUM is a hydrophyllic colloid forming high viscosity gels at low solids.

Its unique combination of properties points to various applications...as a binder, emulsifier, lubricant, film former, dispersant, suspending agent and thickener.

Literature and samples on request

R. T. VANDERBILT CO., INC. • Specialties Department • 230 PARK AVENUE, NEW YORK 17, N. Y.



For Basic Perfume
Specialties, Essential Oils
and Aromatic Chemicals

Our laboratory is at your service.



SCHIMMEL & CO., INC.
601 WEST 26TH STREET
NEW YORK 1, N. Y.

ESSENTIAL OILS (Contd.)

Centiflor Mfg. Co., 6 Varick St., N. Y.
 Ph. Chaleyer, Inc., 160 E. 56th St., N. Y.
 Antoine Chiris Co., Inc., 119 W. 57th St., N. Y.
 Compagnie Duval, Division of S. B. Penick & Co., 50 Church St., N. Y.
 Compagnie Parento, Inc., Croton-on-Hudson, N. Y.
 Consumers Import Co., 350 Fifth Ave., N. Y.
 Cox, Aspden & Fletcher, 39 Cortlandt St., N. Y.
 Dodge & Olcott Inc., 180 Varick St., N. Y.
 P. R. Dreyer, Inc., 119 W. 19th St., N. Y.
 A. C. Drury & Co., 219 East North Water St., Chicago
 Enco Chem. Corp., 441 Lexington Ave., N. Y.
 Felton Chemical Co., 603 Johnson Ave., Brooklyn
 Firmenich & Co., 250 W. 18th St., N. Y.
 Florasynth Laboratories, 1513 Olmstead Ave., N. Y. C.
 Benj. French, Inc., 160—5th Ave., N. Y.
 Fritzsche Brothers, Inc., 76 Ninth Ave., N. Y.
 General Drug Co., 644 Pacific St., Brooklyn
 Givaudan-Delawanna, Inc., 330 W. 42nd St., N. Y.
 Greene Trading Co., 70 Pine St., N. Y. (agents for foreign sellers)
 Gunning & Gunning, 601 W. 26th St., N. Y.
 Chas. L. Huisking & Co., 155 Varick St., N. Y.
 D. W. Hutchinson & Co., 162 Front St., N. Y.
 Lautier Fils, 321 Fifth Ave., N. Y.
 Pierre Lemoine, Inc., 67 Cortlandt St., N. Y.
 Geo. Lueders & Co., 427 Washington St., N. Y.
 Magnus, Mabree & Reynard, 16 Desbrosses St., N. Y.
 A. Maschmeijer, Jr., 43 W. 16th St., N. Y.
 Hijos de Francisco Navarro, 132 Nassau St., N. Y.
 Naugatuck Aromatics, 254 4th Ave., N. Y.
 Neumann-Buslee & Wolfe, 224 W. Huron St., Chicago
 New York Aromatics Co., 5 Beekman St., N. Y.
 Norda Essential Oil & Chem. Co., 601 W. 26th St., N. Y.
 Noville Essential Oil Co., 157 Cedar St., N. Y.
 Orbis Products Corp., 215 Pearl St., N. Y.
 Polak's Frutal Wks., Inc., 36-14 35th St., L. I. City, N. Y.
 Polak & Schwarz, Inc., 667 Washington St., N. Y.
 Edward Remus & Co., 11 W. 42nd St., N. Y.
 Henri Robert, Inc., 39 W. 60th St., N. Y.
 Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
 Roure-Dupont, Inc., 366 Madison Ave., N. Y.
 H. C. Ryland, Inc., 161 Water St., N. Y.
 Schimmel & Co., 601 W. 26th St., N. Y.
 Edwin Seebach Co., 912 Broadway, N. Y.
 Seeley & Co., 136 Liberty St., N. Y.
 Wm. G. Sibbach & Co., 210 S. 2nd Ave., Maywood, Ill.
 Sparhawk Co., Sparkill, N. Y.
 Synflour Scientific Labs., Monticello, N. Y.
 A. M. Todd Co., Kalamazoo, Mich.
 Tombarel Products Corp., 12 E. 22nd St., N. Y.
 Ungerer & Co., 161 Sixth Ave., N. Y.
 Van Dyk & Co., Belleville, N. J.
 Albert Verley, Inc., 440 W. Superior St., Chicago

ETHANOLAMINE (see Triethanolamine)

ETHER

Carbide & Carbon Chemicals Corp., 30 E. 42nd St., N. Y.
 Chas. Cooper & Co., 194 Worth St., N. Y.
 J. T. Baker Chem. Co., Phillipsburg, N. J.
 E. I. Du Pont de Nemours & Co., Wilmington, Del.
 Enjay Co., 15 W. 51st St., N. Y.
 Mallinckrodt Chem. Wks., 3600 N. 2nd St., St. Louis
 Merck & Co., Rahway, N. J. (also Petroleum)
 U. S. Industrial Chem. Co., 60 E. 42nd St., N. Y.

ETHER, PETROLEUM (see Solvents, Petroleum)

ETHYLENE DICHLORIDE (see Solvents, Organic)

EUCALYPTUS OIL (see Essential Oils)

EVAPORATORS (Glycerine and Chemical)

Atlas Steel Construction Co., Irvington, N. Y.
 E. B. Badger & Sons Co., 75 Pitt St., Boston
 Buffalo Fndry. & Mach. Co., Buffalo, N. Y.
 Chemical Equipment Co., Montpelier, Ind.
 Consolidated Prods. Co., 15 Park Row, N. Y. (Used)

ESSENTIAL OILS AND AROMATIC PRODUCTS

*Specialties
for Soaps*



Cedarwood Oil

OIL OF SASSAFRAS
OIL OF RED THYME
LEMON FOR SOAP

Your attention is also directed to
these items . . .

ESSENTIAL OILS
AROMATICS

PERFUME OILS . . . delightful
fragrances for soaps,
liquid soaps, theatre spray,
fly spray, para blocks, pol-
ishes, etc.

• Wire, 'phone or write . . .

Try us for quality, delivery, service. We are
in a position to solve ANY perfume problem,
for in addition to being direct importers, we
also compound various standard and special
items. Try us!

EDWARD REMUS & CO., Inc.

11 WEST 42nd STREET • NEW YORK 18, N. Y.

Cable Address: EDSUMER NEW YORK

Mid-Western Office

806 DELAWARE ST. • KANSAS CITY 1, MO.



To improve your soap—Specify Neo-Fat Fatty Acids

Only Neo-Fat fatty acids, made possible by Armour's patented fractional distillation process, can offer you these distinct advantages . . .

- Faster, easier, more complete saponification!
- A higher yield of anhydrous soap!
- Greater uniformity of the finished soap!
- Variety of choice affording sharper control of finished product!

To assist you in making your selection of the specific fatty acid for your use, average specifications of several widely used Neo-Fats are listed below:

DOUBLE DISTILLED COTTONSEED FATTY ACIDS

Titer.....	37°C.
Neutralization Value.....	200
Iodine Value (Wijs).....	105
Color.....	5 FAC

DOUBLE DISTILLED CORN OIL FATTY ACIDS

Titer.....	30°C.
Neutralization Value.....	199
Iodine Value (Wijs).....	110
Color.....	5 FAC

DOUBLE DISTILLED SOYBEAN FATTY ACIDS

Titer.....	24°C.
Neutralization Value.....	198
Iodine Value (Wijs).....	135
Color.....	5 FAC

DOUBLE DISTILLED COCONUT FATTY ACIDS

Titer.....	28°C.
Neutralization Value.....	254
Iodine Value (Wijs).....	12
Color.....	1 FAC

DOUBLE DISTILLED ANIMAL FATTY ACIDS

Titer.....	40°C.
Neutralization Value.....	197
Iodine Value (Wijs).....	60
Color.....	5 FAC

NEO-FAT 3 (Mixed Oleic-Linoleic Acids)

Titer.....	23°C.
Neutralization Value.....	198
Iodine Value (Wijs).....	120
Color.....	8 FAC

NEO-FAT S-142 (Fractionated Tall Oil Acids)

Titer.....	below 20°C.
Neutralization Value.....	190
Iodine Value (Wijs).....	130
Color.....	8 FAC
Oleic-Linoleic Acids.....	approx. 86%
Rosin Acids.....	approx. 14%

NEO-FAT D-242

(Low-cost Fatty Acid and Rosin Acid Mixture)

Neutralization Value.....	175
Color.....	10 FAC
Oleic-Linoleic Acids.....	approx. 30%
Rosin Acids.....	approx. 70%

In addition, Armour produces a variety of fatty acid products suitable for specialty soaps, shampoos and cosmetics. These include fractionally-distilled commercially pure lauric, myristic, palmitic and stearic acids as well as "tailor-made" mixtures. The Armour fatty acid derivatives—amines, amine acetates, amides, nitriles, quaternary ammonium salts—are also widely used by the soap and sanitary chemicals industry.

For data sheets, samples, quotations, write:

ARMOUR *Chemical* **DIVISION**
ARMOUR AND COMPANY
1355 WEST 31ST STREET • CHICAGO 9, ILLINOIS

EVAPORATORS (Contd.)

Edge Moor Iron Wks., Edge Moor, Del.
First Machy. Corp., 157 Hudson St., N. Y. (Used)
William Garrigue & Co., 9 S. Clinton St., Chicago
Houchin Machy. Co., Hawthorne, N. J.
Lancaster Iron Works, Lancaster, Pa.
Newman Tallow & Soap Machy. Co., 1051 W. 35th St.
Pfaudler Co., Rochester, N. Y.
H. K. Porter Co., 49th & Harrison Sts., Pittsburgh
Ernest Scott & Co., Fall River, Mass.
Stein Equipment Co., 90 West St., N. Y. (Used)
F. J. Stokes Machine Co., Phila., Pa.
Struthers-Wells Corp., Warren, Pa.
Swenson Evaporator Co., Harvey, Ill.
Wurster & Sanger, 5201 S. Kenwood Ave., Chicago
Zaremba Co., 560 Crosby Bldg., Buffalo, N. Y.

FANS (Ventilating & Exhaust)

Buffalo Forge Co., 490 Broadway, Buffalo
Duriron Co., Dayton, Ohio
Garden City Fan Co., 332 S. Michigan, Chicago
General Regulator Corp., 711 W. Lake St., Chicago
Graybar Electric Co., 180 Varick St., N. Y.
Newman Tallow & Soap Machy. Co., 1051 W. 35th St., Chicago

FAT SPLITTING REAGENTS

Alrose Chem. Co., Box 1294, Providence, R. I.
Atlantic Refining Co., 260 S. Broad St., Philadelphia
Emery Industries, Inc., Carew Tower, Cincinnati
Griffin Chem. Co., 1000 16th St., San Francisco
W. C. Hardesty Co., 41 E. 42nd St., N. Y.
Oronite Chem. Co., 200 Bush St., San Francisco
Pennsylvania Refining Co., Butler, Pa.
Petroleum Specialties, Inc., 400 Madison Ave., N. Y.
Sherwood Petroleum Co., Englewood, N. J.
L. Sonneborn Sons, 88 Lexington Ave., N. Y.
Stanco Distributors, Inc., 216 W. 14th St., N. Y.
Standard Oil Co. (Ind.), 910 S. Michigan Ave., Chicago

FATTY ACID PLANTS (Engineering)

William Garrigue & Co., 9 S. Clinton St., Chicago
Alan Porter Lee, Inc., 150 Broadway, N. Y.
Ernest Scott & Co., Fall River, Mass.
Wurster & Sanger, 5201 S. Kenwood Ave., Chicago

FATTY ACIDS, HYDROGENATED (see Hydrogenated Oils)

FATTY ACIDS

(see also Brokers and Dealers)

Armour Chem. Div., Armour & Co., 1355 W. 31st St., Chicago
Carbide & Carbon Chemicals Corp., 30 E. 42nd St., N. Y.
Celina Stearic Acid Co., Celina, Ohio
Concord Chem. Co., Independence Sq., Phila.
T. G. Cooper & Co., Cedar & Venango Sts., Phila.
Darling & Co., 4201 So. Ashland Ave., Chicago
E. F. Drew & Co., Wecoline Div., Boonton, N. J.
Durkee Famous Foods, Inc., 2670 Elston Ave., Chicago
Eastern Industries, Inc., Ridgefield, N. J.
El Dorado Oil Wks., 311 California St., San Francisco
Griffin Chem. Co., 1000 16th St., San Francisco
Emery Industries Inc., 4300 Carew Tower, Cincinnati
A. Gross & Co., 295 Madison Ave., N. Y.
Otto A. C. Hagen Corp., 929 Public Ledger Bldg., Phila.
W. C. Hardesty Co., 41 E. 42nd St., N. Y.
Industrial Chem. Sales Div., West Va. Pulp & Paper Co., 230 Park Ave., N. Y.
Spencer Kellogg & Sons, Buffalo, N. Y.
Los Angeles Soap Co., Los Angeles, Calif.
N. I. Malmstrom & Co., 147 Lombardy St., Brooklyn
Nopco Chemical Co., Harrison, N. J.
Procter & Gamble Co., Cincinnati, O.
J. H. Redding, Inc., 17 Battery Place, N. Y.
Robinson Wagner Co., 110 E. 42nd St., N. Y.
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Sergeant Chemical Co., 7 Dey St., N. Y.

HARDESTY FATTY ACIDS

•
STEARIC ACID

•
RED OIL

•
WHITE OLEINE

•
GLYCERINE

•
STEARINE PITCH

•
**HYDROGENATED
FATTY ACIDS**

•
**ANIMAL & VEGETABLE
DISTILLED FATTY ACIDS**

W. C. HARDESTY CO., Inc.

41 East 42nd St. New York 17, N. Y.

5636 East 61st St., Los Angeles, Calif.

Factories: Dover, Ohio—Los Angeles, Calif.—Toronto, Canada

Cable Address: "Hardoll"

W.C.
HARDESTY
COMPANY

Distilled Fatty Acids

COCONUT FATTY ACIDS

LAURIC ACID

CAPRYLIC ACID

CAPRIC ACID

STEARIC ACID

Distilled White Oleic Acid

HYDROGENATED

VEGETABLE FATTY ACIDS

(titre up to 60° centigrade)

Soya Oil Fatty Acids

Linseed Oil Fatty Acids

Liquid Pitch

Glycerine - High Gravity

Glycerine - Crude - 88%

E. F. DREW & CO., INC.

MAIN OFFICE: 15 EAST 26th STREET

NEW YORK 10, N. Y.

CHICAGO: 919 North Michigan Avenue

BOSTON: Chamber of Commerce Bldg.

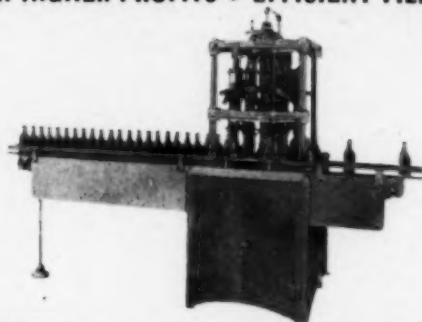
Factory and Laboratories: Boonton, N. J.

mrM MACHINES

LOWER YOUR PACKAGING COSTS

GEAR YOUR PRODUCTION

FOR HIGHER PROFITS • EFFICIENT FILLING

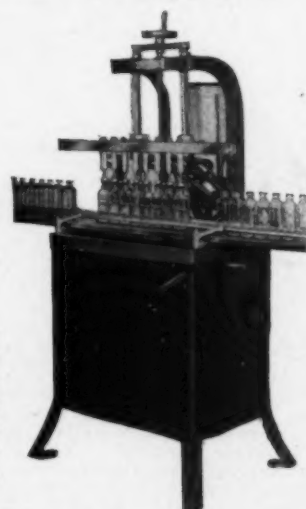


mrM FULLY AUTOMATIC ROTARY FILLER
FOR VISCOUS • FOAMY • STILL LIQUIDS

mrM Universal Straightline
Vacuum
Filler

- ★ Automatic overflow
- ★ Rapid change-over
- ★ MRM no-manifold fill

All-purpose, versatile vacuum filling machine for thin-to-viscous and foamy liquids. Full range of containers from 1 oz. to 1 gal. in glass, and up to quarts in metal.



WRITE FOR DETAILS



- MODERATELY PRICED TO REACH ALL MANUFACTURERS
- NO SKILLED OPERATION OR MAINTENANCE NEEDED
- PARTS ARE SIMPLE—FEW—INEXPENSIVE

CONSULT US ON YOUR PACKAGING PROBLEMS

mrM CO. INC.

custom designed and built fillers and conveyors
191-193 Berry Street, Brooklyn 11, N. Y.
EVergreen 7-3936

FATTY ACIDS (Contd.)

Silmo Chemical Co., Vineland, N. J.
C. F. Simonin's Sons, Tioga & Belgrade St., Phila.
Werner G. Smith Co., 2191 W. 110th St., Cleveland
Southern Cotton Oil Co., Produce Exchange, N. Y.
A. E. Starkie Co., 5461 W. Division St., Chicago
Swift & Co., Union Stock Yards, Chicago
Theobald Industries, Kearny, N. J.
Arthur C. Trask Co., 4103 S. La Salle St., Chicago
Union Bag & Paper Corp., 233 Broadway, N. Y.
Welch, Holme & Clark Co., 439 West St., N. Y.
M. Werk Co., Bernard St., Cincinnati
Wilson-Martin Co., Swanson St., Phila.
Woburn Chemical Corp., Harrison, N. J.

FATTY ALCOHOLS

Carbide & Carbon Chemicals Corp., 30 E. 42nd St., N. Y.
F. I. du Pont de Nemours & Co., Wilmington, Del.
W. C. Hardesty Co., 41 E. 42nd St., N. Y.
N. J. Malmstrom & Co., 147 Lombardy St., Bklyn, N. Y.
M. Michel & Co., 90 Broad St., N. Y.
Nopec Chemical Co., Harrison, N. J.
Robinson Wagner Co., 110 E. 42nd St., N. Y.
Werner G. Smith Co., 2191 W. 110th St., Cleveland
Welch, Holme & Clarke Co., 439 West St., N. Y.
Woburn Chemical Corp., Harrison, N. J.

FATTY ALCOHOLS, Sulfonated (see Sulfonated Fatty Alcohols)

FELDSPAR (see Abrasives and Fillers)

FIBRE CANS (see Cans, Fibre)

FILLERS (see Talc, Bentonite, Clays, Etc.)

FILLING, for the Trade, (Filling liquids, powders, etc.) See Packaging for the Trade

FILLING MACHINERY (for Chips, Flakes)

Allied Steel & Equip. Co., 1007 Springfield Ave., Irvington, N. J.
Consolidated Prods. Co., 15 Park Row, N. Y. (Used)
J. L. Ferguson Co., Joliet, Ill.
First Machy. Corp., 157 Hudson St., N. Y. (Used)
B. F. Gump Co., 431 S. Clinton St., Chicago (Bbls & Bags)
S. Howes Co., Silver Creek, N. Y. (Bbls.)
Johnson Automatic Sealer Co., Ltd., Battle Creek, Mich.
Newman Tallow & Soap Machy. Co., 1051 W. 35th St., Chicago (Used)
Pneumatic Scale Corp., North Quincy, Mass.
Geo. G. Rodgers Co., 225 W. 34th St., N. Y.
Sprout, Waldron & Co., Muncy, Pa.
Stein Equipment Corp., 426 Broome St., N. Y. (Used)
Stokes & Smith Co., 4915 Summerdale Ave., Philadelphia
Triangle Package Machine Co., 906 N. Spaulding Ave., Chicago
Weigh Right Automatic Scale Co., Joliet, Ill.

FILLING MACHINERY (for Liquids, in Small Bottles, Cans, Etc.)

Allied Steel & Equip. Co., 1007 Springfield Ave., Irvington, N. J.
Alsop Engineering Corp., 103 Green St., Milldale, Conn.
S. F. Bowser & Co., Ft. Wayne, Ind.
Clevon Products Co., 27-31 Mechanic St., Buffalo
Consolidated Prods. Co., 15 Park Row, N. Y. (Used)
Ertel Engineering Co., Kingston, N. Y.
Filter Paper Co., 2464 N. Michigan Ave., Chicago
First Machy. Corp., 157 Hudson St., N. Y. (Used)
General Mills, Inc., 1620 Central Ave., NE, Minneapolis, Minn.
Horix Mfg. Co., Pittsburgh
Hornney & Co., 420 Lexington Ave., N. Y.
Karl Kiefer Machine Co., 919 Martin St., Cincinnati
M. R. M. Co., 191 Berry St., Bklyn.
Mandel Products, 207 Astor St., Newark, N. J.
Newman Tallow & Soap Machy. Co., 1051 W. 35th St., Chicago (Used)

YOUR GUARANTEE OF THE BEST FOR SOAP

PALM FATTY ACID
COTTON FATTY ACID
TALLOW FATTY ACID
COCONUT FATTY ACID
CASTOR FATTY ACID

WOBURN
dependable
PRODUCTS

DISTOLINE
HELIOLINE D
LAURIC ACID
CAPRIC ACID
SOYA FATTY ACID

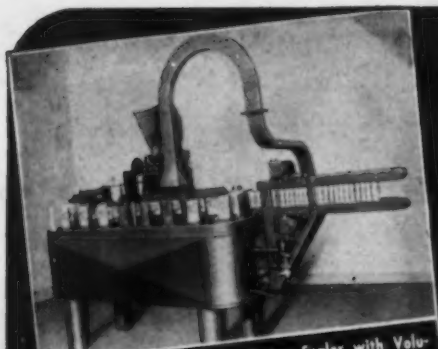
Because of continued difficulty in obtaining many of the base products for the manufacture of soap, Woburn has specialized in the development of organic chemicals to meet your individual requirements. Our research organization will be pleased to assist you in solving matters relating to the use or development of organic chemicals.

SPECIAL FATTY ACIDS ON REQUEST

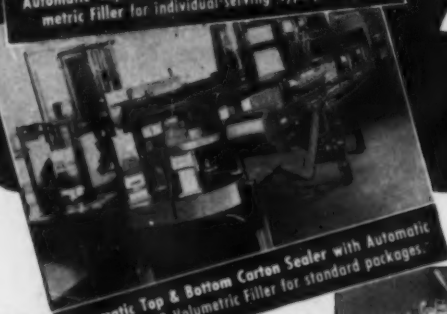
WOBURN CHEMICAL CORP. (N. J.)

1200 HARRISON AVE.
KEARNY, N. J.

Woburn Fine Chemicals, Inc., Kearny, N. J.—Woburn Degreasing Company, Woburn, Mass.—Woburn Chemicals Ltd., Toronto, Canada



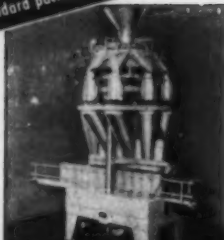
Automatic Top & Bottom Carton Sealer with Volumetric Filler for individual-serving-type packages.



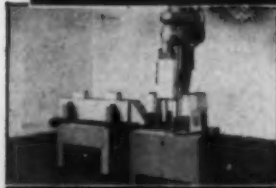
Automatic Top & Bottom Carton Sealer with Automatic Carton Feed & Volumetric Filler for standard packages.



Automatic Telescoping Volumetric Filler for packaging semi- and free-flowing dry products.



Net Weight Scale for filling round and rectangular metal, paper and glass containers.



Auger Packer-Weigher for semi- and non-free flowing products.



Automatic Case Imprinter for imprinting end or side panels (or both) of paper shipping cases.



Serial Numbering Device for Model D Case Gluer.



Model D Automatic Shipping Case Gluer and Sealer.

OUNCES TO POUNDS...

CARTONS or CASES

PACKOMATIC

FILLS, WEIGHS, SEALS
AUTOMATICALLY

YOU get a wide range of package forming, filling, weighing and sealing equipment from PACKOMATIC—a wealth of package and shipping case handling know-how to save you time, labor, money.

If you have a packaging program up or contemplated, ask for PACKOMATIC'S recommendations before you commit yourself.

Package filling equipment for units from ounce to pound weights—shipping case gluing and sealing equipment in a wide range of case sizes—there is a PACKOMATIC to help you speed your wares to market. For more than a quarter of century, PACKOMATIC has been working with America's top flight enterprises, and today some of the nation's best known product identities are being efficiently and economically handled by PACKOMATIC equipment.

You will find personal PACKOMATIC counsel available to you without cost or obligation through 14 strategically located contact offices. Consult your classified telephone directory for the office nearest you, or write J. L. FERGUSON CO., Joliet, Ill.

PACKOMATIC

PACKAGING MACHINERY J.L. FERGUSON CO., JOLIET, ILL.

Chicago • New York • Boston • Philadelphia • Baltimore
Cleveland • Denver • San Francisco • Los Angeles
Seattle • Portland • Tampa • Dallas • New Orleans

FILLING MACHINERY (for Liquids, in Small Bottles, Cans, Etc.) (Contd.)

Packer Machinery Corp., 30 Irving Pl., N. Y.
Pfaudler Co., Rochester, N. Y.
Pneumatic Scale Corp., North Quincy, Mass.
Geo. G. Rodgers Co., 225 W. 34th St., N. Y.
Salkover Metal Processing, Dixie Terminal Bldg., Cincinnati
Scientific Filter Co., 12 Franklin Sq., N. Y.
Stein Equipment Co., 90 West St., N. Y. (Used)
F. J. Stokes Machine Co., 5918 Tabor Rd., Philadelphia
U. S. Bottlers Machinery Co., 4025 N. Rockwell St., Chicago
The Vol-U-Meter Co., 707 Ohio St., Buffalo, N. Y.
Weigh Right Automatic Scale Co., Joliet, Ill.

FILLING MACHINERY (for Liquids in drums, carboys, large cans, etc.)

Allied Steel & Equipment Co., 1007 Springfield Ave., Irvington, N. J.
Alsop Engineering Corp., 103 Green St., Milldale, Conn.
S. F. Bowser & Co., Ft. Wayne, Ind.
Clevon Products Co., 27-31 Mechanic St., Buffalo
Consolidated Prods. Co., 15 Park Row, N. Y. (Used)
Filter Paper Co., 2464 N. Michigan Ave., Chicago
First Machy. Corp., 157 Hudson St., N. Y. (Used)
Hornney & Co., 420 Lexington Ave., N. Y.
M. R. M. Co., 191 Berry St., Bklyn.
Mandel Products, 207 Astor St., Newark, N. J.
National Acme Co., E. 131st St. & Coit Ave., Cleveland
Newman Tallow & Soap Machy. Co., 1051 W. 35th St., Chicago (Used)
Packer Machinery Corp., 30 Irving Pl., N. Y.
Geo. G. Rodgers Co., 225 W. 34th St., N. Y.
Stein Equipment Co., 90 West St., N. Y. (Used)

FILLING MACHINERY (for Pastes, Cans)

Allied Steel & Equipt. Co., 1007 Springfield Ave., Irvington, N. J.
Clevon Products Co., 27-31 Mechanic St., Buffalo
Consolidated Prods. Co., 15 Park Row, N. Y. (Used)

J. L. Ferguson Co., Joliet, Ill.

Filler Machine Co., 1250 E. Montgomery St., Phila.
Filter Paper Co., 2464 N. Michigan Ave., Chicago
First Machy. Corp., 157 Hudson St., N. Y. (Used)
Hornney & Co., 420 Lexington Ave., N. Y.
Karl Kiefer Machine Co., 919 Martin St., Cincinnati
Newman Tallow & Soap Machy. Co., 1051 W. 35th St., Chicago (Used)
Pfaudler Co., Rochester, N. Y.
Progressive Eng. Co., Torresdale, Pa.
Geo. G. Rodgers Co., 225 W. 34th St., N. Y.
Scientific Filter Co., 12 Franklin Sq., N. Y.
C. T. Small Mfg. Co., 1204 Ferguson Ave., St. Louis, Mo.
Sprague-Sells Corp., 308 W. Washington St., Chicago
Stein Equipment Co., 90 West St., N. Y. (Used)
Stokes & Smith Co., 4915 Summerdale Ave., Phila.
F. J. Stokes Machine Co., 5918 Tabor Rd., Philadelphia
Triangle Package Machy. Co., 910 N. Spaulding Ave., Chicago
U. S. Bottlers Mch. Co., 4015 N. Rockwell St., Chicago
Vol-U-Meter Co., 707 Ohio St., Buffalo, N. Y.
Weigh Right Automatic Scale Co., Joliet, Ill.

FILLING MACHINERY (for Paste, Drums)

Allied Steel & Equipt. Co., 1007 Springfield Ave., Irvington, N. J.
Consolidated Prods. Co., 15 Park Row, N. Y. (Used)
J. H. Day Co., 1144 Harrison Ave., Cincinnati
Filter Paper Co., 2464 S. Michigan Ave., Chicago
First Machy. Corp., 157 Hudson St., N. Y. (Used)
Newman Tallow & Soap Machy. Co., 1051 W. 35th St., Chicago (Used)
Geo. G. Rodgers Co., 225 W. 34th St., N. Y.
Stokes & Smith Co., 4915 Summerdale Ave., Phila.

FILLING MACHINERY (for Pastes, Tubes)

Allied Steel & Equipt. Co., 1007 Springfield Ave., Irvington, N. J.
Clevon Products Co., 27-31 Mechanic St., Buffalo
Arthur Colton Co., Detroit, Mich.
Consolidated Prod. Co., 15 Park Row, N. Y. (Used)
Filter Paper Co., 2464 S. Michigan Ave., Chicago
First Machy. Corp., 157 Hudson St., N. Y. (Used)

Expired?

WHEN YOU RECEIVE A NOTICE THAT YOUR SUBSCRIPTION TO *SOAP & SANITARY CHEMICALS* IS ABOUT TO EXPIRE, WILL YOU PLEASE SEND IN THAT OLD RENEWAL CHECK PRONTO? *SOAP & SANITARY CHEMICALS* IS A MEMBER OF THE A. B. C. (AUDIT BUREAU OF CIRCULATION) AND IF YOU DO NOT RENEW PROMPTLY, WE HAVE TO TAKE YOUR NAME OFF THE SUBSCRIPTION LIST . . . (A.B.C. RULE) . . . DON'T MISS ANY ISSUES . . . SEND IN YOUR CHECK PROMPTLY . . . \$4.00 FOR ONE YEAR, \$7.00 FOR TWO . . . FOREIGN SUBSCRIPTIONS \$5.00 FOR ONE YEAR, \$9.00 FOR TWO.

THE PUBLISHERS.

"S & S" FILLING • PACKAGING • WRAPPING EQUIPMENT

FOR SOAP POWDERS, CLEANSERS, INSECTICIDES, CHEMICALS



Filling cans of Mince Powdered Hand Soap with an S & S Universal Filler.



Packaging Hershey's Soap Granules on Stokes and Smith Machines.

**For Small or Large Requirements—Semi-Automatic or Fully Automatic
"SPEEDS TO SUIT YOUR NEEDS"—15-30-60-120 Packages Per Minute**



A. UNIVERSAL FILLING MACHINE
for Powders, Granular Products or Pastes. 15-20 Per Min.

B. AUTOMATIC FILLING MACHINE
Two or Four Station. 30-60-120 Per Min.

C. CARTON FILLING & SEALING MACHINE
15-30-60-120 Per Min.

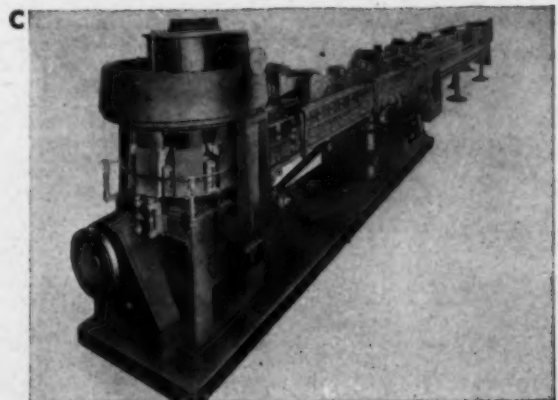
D. TIGHT WRAPPING MACHINE
15-60 Per Min.

Investigate the S & S Auger-Vac Method of vacuum-auger filling for powdered products. Insures a clean dustless fill and a tight pack.

We will gladly send complete information. Write to:

STOKES & SMITH CO

PACKAGING MACHINERY PAPER BOX MACHINERY
4915 SUMMERDALE AVE., PHILADELPHIA 24, U. S. A.



FILLING MACHINERY (for Pastes, Tubes) (Contd.)

Karl Kiefer Machine Co., 919 Martin St., Cincinnati
Newman Tallow & Soap Machy. Co., 1051 W. 35th St., Chicago (Used)
Geo. G. Rodgers Co., 225 W. 34th St., N. Y.
Scientific Filter Co., 12 Franklin Sq., N. Y.
Stein Equipment Co., 90 West St., N. Y. (Used)
F. J. Stokes Machine Co., 5918 Tabor Rd., Philadelphia

FILLING MACHINERY (for Free flowing dry products)

Allied Steel & Equip. Co., 1007 Springfield Ave., Irvington, N. J.
Automatic Scale Co., 591 Hudson St., N. Y.
Consolidated Package Machinery Corp., 1400 West Ave., Buffalo, N. Y.
Consolidated Prod. Co., 15 Park Row, N. Y. (Used)
J. H. Day Co., 1144 Harrison Ave., Cincinnati
J. L. Ferguson Co., Joliet, Ill.
First Machy. Corp., 157 Hudson St., N. Y. (Used)
B. F. Gump Co., 412 S. Clinton St., Chicago
S. Howes Co., Silver Creek, N. Y. (Bbls.)
Johnson Automatic Sealer Co., Battle Creek, Mich.
Newman Tallow & Soap Machy. Co., 1051 W. 35th St., Chicago (Used)
Pneumatic Scale Corp., North Quincy, Mass.
F. B. Redington Co., 112 S. Sangamon St., Chicago
Geo. G. Rodgers Co., 225 W. 34th St., N. Y.
A. H. Ross & Co., Ludlow, Ky.
Stein Equipment Co., 90 West St., N. Y. (Used)
Sprout, Waldron & Co., Muncy, Pa.
F. J. Stokes Mach. Co., 5918 Tabor Rd., Philadelphia
Stokes & Smith Co., 4915 Summerdale Ave., Phila.
Triangle Package Machinery Co., 906 N. Spaulding Ave., Chicago
U. S. Automatic Box Machy. Co., Roslindaie, Boston, 31 Mass.
Weigh Right Automatic Scale Co., Joliet, Ill.

FILTER AIDS

American Colloid Co., 363 W. Superior St., Chicago
Atlantic Refining Co., 260 Broad St., Phila.
Attapulugus Clay Co., 210 W. Washington Sq., Phila.
Carbide & Carbon Chem. Corp., 30 E. 42nd St., New York
Dicalite Co., 120 Wall St., New York
Filter Paper Co., 2464 S. Michigan Ave., Chicago
Filtrol Corp., 315 W. 5th St., Los Angeles
Industrial Chem. Sales Div., West Va. Pulp and Paper Co., 230 Park Ave., N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Johns-Manville Corp., 22 East 40th St., New York
Peerless Clay & Mineral Co., Pueblo, Colo.
Satisfaction Supply Co., 508 W. Bdway., N. Y.
A. E. Starkie, 5461 W. Division St., Chicago
Witco Chemical Co., 295 Madison Ave., N. Y.

FILTER CLAYS (see Clays)

FILTER CLOTHS

Abbott Associates, 417 Park Sq. Bldg., Boston
Alsop Engineering Corp., 103 Green St., Milldale, Conn.
Cleveland Wire Cloth & Mfg. Co., 3574 E. 78th St., Cleveland
Filter Paper Co., 2464 N. Michigan Ave., Chicago
B. F. Gump Co., 431 S. Clinton St., Chicago
Wm. E. Hooper & Sons, Juniper & Cherry Sts., Philadelphia
Hornney & Co., 420 Lexington Ave., N. Y.
Independent Filter Press Co., 189 Seventh St., Brooklyn
National Filter Cloth & Weaving Co., 220 E. 42nd St., N. Y.
Newark Wire Cloth Co., 223 Verona Ave., Newark, N. J.
Oliver United Filters, Inc., 33 W. 42nd St., N. Y.
J. T. Perkins Co., 669 Kent Ave., Brooklyn
Wm. R. Perrin & Co., 349 W. 23rd St., Chicago
Satisfaction Supply Co., 508 W. Broadway, N. Y.
Scientific Filter Co., 12 Franklin Sq., N. Y.
T. Shriver & Co., Harrison, N. J.
D. R. Sperry & Co., Batavia, Ill.

FILTER PAPER

Alsop Engineering Corp., 103 Green St., Milldale, Conn.
H. Reeve Angel & Co., 7 Spruce St., N. Y.

Filter Paper Co., 2464 S. Michigan Ave., Chicago
General Chemical Co., 40 Rector St., N. Y.
August Giese & Son, 121 E. 24th St., N. Y.
Hornney & Co., 420 Lexington Ave., N. Y.
Karl Kiefer Machine Co., Cincinnati, O.
Palo Co., 81 Reade St., N. Y.
Satisfaction Supply Co., 508 W. Bdway., N. Y.
Scientific Filter Co., 12 Franklin Sq., N. Y.
T. Shriver & Co., Harrison, N. J.

FILTER PRESSES

Alsop Engineering Corp., 103 Green St., Milldale, Conn.
Consolidated Prods Co., 15 Park Row, N. Y. (Used)
Ertel Engineering Corp., Kingston, N. Y.
Filter Paper Co., 57 E. 24th St., Chicago
First Machy. Corp., 157 Hudson St., N. Y. (Used)
Hornney & Co., 420 Lexington Ave., N. Y.
Independent Filter Press Co., 189 Seventh St., Brooklyn
Newman Tallow & Soap Machy. Co., 1051 W. 35th St., Chicago (Used)
Oliver United Filters, Inc., 33 W. 42nd St., N. Y.
Patterson Foundry & Machine Co., East Liverpool, Ohio
Wm. R. Perrin & Co., 349 W. 23rd St., Chicago
Scientific Filter Co., 12 Franklin Sq., N. Y.
T. Shriver & Co., Harrison, N. J.
Sparkler Mfg. Co., 201 Lake St., Mundelein, Ill.
D. R. Sperry & Co., Batavia, Ill.
Stein Equipment Co., 90 West St., N. Y. (Used)
United Filters Corp., Hazelton, Pa.

FILTERS

Allied Steel & Equip. Co., 1007 Springfield Ave., Irvington, N. J.
Alsop Engineering Corp., 103 Green St., Milldale, Conn.
S. F. Bowser & Co., 1302 E. Creighton Ave., Ft., Wayne, Ind.
Consolidated Prods. Co., 15 Park Row, N. Y. (Used)
Cuno Engineering Co., Meriden, Conn.
Ertel Engineering Corp., Kingston, N. Y.
Filter Paper Co., 2464 S. Michigan Ave., Chicago
First Machy. Corp., 157 Hudson St., N. Y. (Used)
Foster Pump Wks., Inc., 54 Washington St., Brooklyn
Jacob House & Sons, 52 St. Paul St., Buffalo
Karl Kiefer Machine Co., 919 Martin St., Cincinnati
Lancaster Iron Works, Lancaster, Pa.
Mixing Equipment Co., 1087 Garson Ave., Rochester
Newman Tallow & Soap Machy. Co., 1051 W. 35 St., Chicago (Used)
Oliver United Filters, Inc., 33 W. 42nd St., N. Y.
Permutit Co., 330 W. 42nd St., N. Y.
Pfahler Cleland Co., Galion, O.
Scientific Filter Co., 12 Franklin Sq., N. Y.
T. Shriver & Co., Harrison, N. J.
Sparkler Mfg. Co., 201 Lake St., Mundelein, Ill.
Stein Equipment Co., 90 West St., N. Y. (Used)
U. S. Bottlers Machy. Co., 4015 N. Rockwell St., Chicago
Whiting Corp., Harvey, Ill.

FIRE EXTINGUISHER FLUID

Carbide & Carbon Chem. Corp., 30 E. 42nd St., N. Y.
Cole Laboratories, 23rd St. & 7th Av., L. I. City
Crystal Soap & Chem. Co., 6300 State Rd., Philadelphia
Dow Chemical Co., Midland, Mich.
E. I. du Pont de Nemours & Co., Wilmington, Del.
Fuld Bros., 702 S. Wolfe St., Baltimore
J. F. Kerns Chem. Prods., 2239 S. Michigan Ave., Chicago
James Good Co., Susquehanna Ave. & Martha St., Phila.
Imperial Prods. Co., 1600 Fountain St., Phila.
Miranol Chemical Co., P.O. Box 118, Milltown, N. J.
Prior Chem. Corp., 420 Lexington Ave., N. Y.
E. B. Snyder Labs., 2137 E. Harold St., Philadelphia
Stauffer Chem. Co., 420 Lexington Ave., N. Y.
Uncle Sam Chem. Co., 575 W. 131st St., New York
Westvaco Chlorine Prod. Corp., 405 Lexington Ave., N. Y.

FIRE-PROOFING COMPOUNDS

Alrose Chem. Co., Box 1294, Providence, R. I.
Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
Croton Chem. Corp., 114 Liberty St., N. Y.
E. I. du Pont de Nemours & Co., Wilmington, Del.
Eagle Soap Corp., Huntington, Ind.
Fuld Bros., 702 S. Wolfe St., Baltimore

FEDERAL

FLOOR FINISHES and MAINTENANCE MATERIALS A QUALITY PRODUCT for EVERY PURPOSE and EVERY SURFACE

Federal Floor Preservatives and Polishes are highly perfected products. They are the result of constant research, both in the laboratory and in practical usage. They are specialized products made by America's largest manufacturer of Preservatives and Polishes selling in bulk.

● NO-BURN GYM FINISH



The outstanding original finish for gymnasium floors. A hard, durable finish—will not rubber-burn, withstands boiling water, resists alkalies, acid, heat and cold—impervious to fresh and salt water. Easily

applied with a lambs' wool applicator. Other uses—handball courts, squash racquet courts, badminton courts and other floor surfaces for athletic activities.

● G.F.B. CONCENTRATED BASE COLORS



Highly perfected concentrated base colors ready for use, to impart colors as well as extreme durability on wood, concrete and cement surfaces. Made in Light Oak, Dark Oak, Light Gray, Dark Gray, Walnut, Maroon, Green.

● FED-CO PENETRATING SEALER



This is a highly specialized penetrating sealer for wood floors. Seals wood pores, makes a harder, longer wearing floor that is easy to clean. Meets the conditions and requirements of large organizations

operating chain units. Applied by spraying or large lamb's wool applicator. Forms a hard, durable finish that will not stain merchandise accidentally dropped on it.

● PENETROIL SEALER

A penetrating sealer, very pale in color, that can be used for sealing either new surfaces or surfaces that have been formerly sealed. It properly fills the pores and is resistant to water.

Especially recommended as a sealer type material for use where subsequent coats of wax are to be applied.

● TERRAZZO SEALER

The perfect sealer for terrazzo and marble floors. Reduces cost of maintenance. Prevents penetration of dirt. Crystal clear, absolutely will not discolor tile upon application.

● TERRAZZO FINISH

Apply with mop—Dries quickly—Can be buffed to a beautiful lustre—Will not discolor or darken the terrazzo.

● MOP VAR



A Penetrating Sealer to be applied with a mop or other applicator. Reduces maintenance and application costs. For wood, concrete, hard mastic or magnesite, cork and cork tile.

● LIGHTNING LUSTRE

A wear and water resisting, self-polishing, high lustre carnauba wax base finish of highest quality. For linoleum, congoium, wood, rubber tile, soft composition and for maintenance of practically any surface.

● LIQUID OIL BASE WAX

A wax of the oil base type. Applied with a mop or applicator. Buffs and polishes beautifully. A superior product of its type.

● No. 70 RESTORER

Cleanses sealed floors of dirt, dust, grease, rubber burns and other disfigurations, imparts a fine lustre and saves much time over ordinary operations. Ideal for sealed wood, cement, linoleum and other surfaces.

● GYM FINISH CLEANER and POLISH

Removes rubber deposits or burns without dulling, softening, or in any way affecting the original finish. It cleans, revives, polishes and protects. Applied by a spray or large cotton or wool mop. Will not collect dust or cause a slippery condition. Covers approximately 2400 sq. ft. per gal.

● MASTIC ASPHALT TILE SEALER

Seals the tile against dirt, dust, grease, etc. Makes the surface easy to keep clean, reduces scrubbing and prolongs the life of the tile.

● GYM FINISH MARKING ENAMELS

Another Federal specialized product made for marking hand ball courts, basket ball floors, running lanes, etc. Has the remarkable wearing quality of Gym Finish and possesses great covering and hiding power. Made in White, Red, Black, Yellow, Blue, Green, Tan, Ivory, Orange and Jade.

PASTE WOOD FILLERS ● VARNISH REMOVERS

Our laboratories are constantly developing new products and perfecting new methods and treatments for beautifying and preserving all floor surfaces. Write for complete information, testing samples, and prices. Send now for our FREE 20 page booklet which tells what product to use and where to use it . . . the answers to your floor maintenance problems.

FEDERAL VARNISH DIVISION

DEPT. 48, ASHLAND AVE. AT 29th STREET

CHICAGO 8, ILLINOIS

FIRE PROOFING COMPOUNDS (Contd.)

Glyco Products Co., 26 Court St., Bklyn.
Arnold Hoffman Co., Providence, R. I.
Hysan Prods. Co., 932 W. 38th Place, Chicago.
Imperial Prods. Co., 1600 Fountain St., Phila.
J. F. Kerns Chem. Prods., 2239 S. Michigan Ave., Chicago
Johns Manville Co., 22 E. 40th St., N. Y.
Monsanto Chemical Co., 1724 South Second St., St. Louis
Niacet Chemicals Corp., Niagara Falls, N. Y.
Per-Mo Products Co., 3604 Woodland Ave., Kansas City, Mo.
Price Fire & Water Proofing Co., Poughkeepsie, N. Y.
Protexol Corp., 32 Market St., Kenilworth, N. J.
Victor Chemical Works, 141 West Jackson Bldg., Chicago

FISH OILS

(see also Brokers and Dealers)

Atlantic Products Corp., Commercial Trust Bldg., Phila
Atlas Refinery, Lockwood St., Newark, N. J.
Consumers Import Co., 350 Fifth Ave., N. Y.
Falk & Co., Pittsburgh
James Good Co., Susquehanna Ave. & Martha St., Phila.
Hooker Electrochemical Co., Niagara Falls, N. Y.
Murray Oil Products Co., 21 West St., N. Y.
Nopco Chem. Co., Harrison, N. J.
Pacific Vegetable Oil Co., 62 Townsend St., San Francisco
J. H. Redding, Inc., 17 Battery Place, N. Y.
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Werner G. Smith Co., 2191 W. 110th St., Cleveland
A. E. Starkie Co., 5461 W. Division St., Chicago
Swan Finch Oil Corp., 30 Rockefeller Plaza, N. Y.
Arthur C. Trask Co., 4103 S. La. Salle St., Chicago
Welch, Holme & Clark Co., 439 West St., N. Y.

FISH OIL SOAPS

Crystal Soap & Chem. Co., 6300 State Rd., Phila.
Falk & Co., Pittsburgh 30, Pa.
James Good, Inc., 2116 E. Susquehanna Ave., Phila.
R. W. Greeff & Co., 10 Rockefeller Plaza, N. Y.
Hockwald Chem. Co., 125 Mississippi St., San Francisco
R. M. Hollingshead Corp., Camden, N. J.
Nopco Chem. Co., Harrison, N. J.
Newell Guttradt Co., 350 Fremont St., San Francisco
North Coast Chem. & Soap Works, Seattle, Wash.
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Theo. B. Robertson Prods. Co., 700 W. Division St., Chicago
Schaeffer Bros. & Powell Mfg. Co., 102 Barton St., St. Louis.
Silmo Chemical Co., Vineland, N. J.
Werner G. Smith Co., 2191 W. 110th St., Cleveland
Thompson-Hayward Chem. Co., Kansas City, Mo.
Welch, Holme & Clark Co., 439 West St., N. Y.

FLAKE SOAPS (see CHIP SOAPS)

FLOATING SOAPS

Armour & Co., 1355 W. 31st St., Chicago
Beach Soap Co., Lawrence, Mass.
Colgate-Palmolive-Peet Co., Jersey City, N. J.
Cudahy Packing Co., 221 N. La Salle St., Chicago
J. Eavenson & Sons, Camden, N. J.
Haskins Bros. & Co., Omaha
Hewitt Soap Co., Dayton, Ohio
Iowa Soap Co., Burlington, Iowa
Lightfoot Schultz Co., 663 Fifth Ave., N. Y.
Procter & Gamble Co., Cincinnati
Schmidt Soap Products Co., 236 W. North Ave., Chicago
John T. Stanley Co., 642 W. 30th St., N. Y.
Swift & Co., Chicago
M. Werk Co., Cincinnati, O.
Allen B. Wrisley Co., 6801 W. 65th St., Chicago

FLOOR FINISHES (Non-Wax)

Ampion Corp., 4-88-47th Ave., Long Island City, N. Y.
Boston Chemical Industries, 64 E. Brookline St., Boston
Buckingham Wax Co., 51-03 Van Dam St., L. I. City, N. Y.



Self Polishing

FLOOR WAX

All Purpose Liquid Soap Type

CLEANER

Heavy Duty Liquid Soap Type

CLEANER

FURNITURE POLISH

Available in

DRUM LOTS



M & H LABORATORIES

2705 ARCHER AVENUE
CHICAGO 3 ILLINOIS

FLOOR SEALS FINISHES and WAXES...



Are Potential Profit Makers
for Chemical and Sanitary
Jobbers Featuring...

WASHBURN'S Finishes

Under Their Own Label

Washburn Offers Everything You Need

**QUALITY • DURABILITY •
APPEARANCE • PRICE**

If you are not already profiting from Washburn's Floor Finishes write for details. There are hundreds of profitable sales all around you—Cash in on these quick profits and easy repeat orders. All products now back to pre-war quality or better.

FREE

Sales Helps for You

- "Modern Floor Maintenance," a manual for your salesmen.
- Panels Showing the Finished Flooring.
- Color Cards.

Write for them today

T. F. WASHBURN CO.

2244 ELSTON AVE.

CHICAGO 14, ILL.

Manufacturers of Floor Finishes For 59 Years

FLOOR FINISHES (Non-Wax) (Contd.)

Candy & Co., 2515 W. 35th St., Chicago
 Chemical Compounding Corp., 262 Huron St., Bklyn.
 Chemical Mfg. & Dist. Co., Easton, Pa.
 Chem. Service Co. of Balto., Howard & West Sts., Balto.
 Chemical Supply Co., Plymouth Bldg., Cleveland
 Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
 Churchill Mfg. Co., Galesburg, Ill.
 Clifton Chemical Co., 62 William St., N. Y.
 Davies-Young Soap Co., Dayton, O.
 Delta Chem. Co., 4 Payson Ave., N. Y.
 Eagle Soap Corp., Huntington, Ind.
 Empire Chemical Prods. Co., 10 Longworth St., Newark,
 Federal Varnish Division, S. Ashland Ave. at 29th St.,
 Chicago
 Franklin Research Co., 5134 Lancaster Ave., Phila.
 Fuld Bros., 702 S. Wolfe St., Baltimore
 P. D. George Co., 5200 N. 2nd St., St. Louis
 Higley Chemical Co., Dubuque, Iowa
 Hockwald Chemical Co., 135 Mississippi St.,
 San Francisco
 Hysan Prods. Co., 932 W. 38th Place, Chicago.
 J. F. Kerns Chem. Prods., 2239 S. Michigan Ave.,
 Chicago
 La Maison Prods., Inc., 80 York St., Brooklyn
 Lewis Soap & Chem. Co., Oakland, Calif.
 Midland Labs., Dubuque, Iowa
 Multi-Clean Prods., 2277 Ford Pkwy., St. Paul
 Peck's Products Co., 610 E. Clarence Ave., St. Louis
 Rex-Cleanwall Corp., Brazil, Ind.
 Theo. B. Robertson Prods. Co.,
 700 W. Division St., Chicago
 Shawmut Specialty Co., 313 Centre St., Boston
 Solshine Mfg. Co., 412—2nd St., Fall River, Mass.
 L. Sonneborn Sons, Inc., 88 Lexington Ave., N. Y.
 S. S. Stafford, Inc., 603 Washington St., N. Y.
 Standard Oil Co. (Calif.), 225 Bush St., San Francisco
 Standard Oil Co. (Ind.), 910 S. Michigan Ave., Chicago
 J. A. Tumbler Labs., 423 Hanover St., Baltimore
 Twin City Shellac Co., 340 Flushing Ave., Brooklyn
 Uncle Sam Chem. Co., 573 W. 131st St., N. Y.
 U. S. Sanitary Spec. Corp., 435 S. Western Ave., Chicago
 Victory Chem. Co., 148 Fairmount Ave., Phila.
 T. F. Washburn Co., 2244 Elston Ave., Chicago
 Windsor Wax Co., 611 Newark St., Hoboken, N. J.
 G. H. Wood & Co., Toronto, Canada

FLOOR MACHINES

Adams Prods., Inc., 248 W. Fairfield Ave., St. Paul
 Amer. Floor Surfacing Mach. Co., Toledo, O.
 Atlas Floor Surfacing Mach. Corp., 248 E. 34th St.,
 N. Y.
 Electric Spravit Co., Sheboygan, Wis.
 Fay Co., 279 Fifth Ave., N. Y.
 Finnell System, Inc., Elkhart, Ind.
 General Floorcraft Corp., 333 Sixth Ave., N. Y.
 Hild Floor Machine Co., 1313 W. Randolph St., Chicago
 Hockwald Chem. Co., 135 Mississippi St., San Francisco
 Kent Co., Rome, N. Y.
 S. C. Lawlor Co., 122 N. Aberdeen St., Chicago
 Lincoln-Schlueter Floor Machy. Co.,
 220 W. Grand Ave., Chicago
 Multi-Clean Prods., 2277 Ford Pkwy., St. Paul
 Ponsell Floor Machine Co., 220 W. 19th St., N. Y.
 Rex-Cleanwall Corp., Brazil, Ind.
 G. H. Wood & Co., Toronto, Ont., Canada

FLOOR SCRAPERS

Atlas Floor Surfacing Mach. Corp., 248 E. 34th St.,
 N. Y.
 Churchill Mfg. Co., Galesburg, Ill.
 A. F. Dormeyer Mfg. Co., 4316 N. Kilpat'k St., Chicago
 Greenview Mfg. Co., 2557 Greenview Ave., Chicago
 Lincoln-Schlueter Floor Machy. Co.,
 512 S. Peoria Ave., Chicago
 White Mop Wringer Co., Fultonville, N. Y.

1948 BLUE BOOK



REMEMBER? 1923, 25 years ago, Carnauba wax was 21c a pound . . . No-Rubbing Wax didn't exist . . . Morpholine was unknown . . . NSSA was founded . . . and **Windsor Wax Company, Inc.**, was born.

TODAY . . . 1948, WINDSOR OFFERS YOU 25 years of experience and specialization in floor waxes and wax research, backed by shipments of millions of pounds, millions of gallons of wax products in all sizes, to all 48 States and all 5 continents. This experience and specialized knowledge are yours when you buy from Windsor. You deal with a "Wax House" exclusively in Windsor, applying every phase of vital wax know-how to your needs.

WINDSOR MANUFACTURES: Water Emulsion Waxes, liquid and paste . . . Solvent Waxes, liquid and paste . . . Pigment Waxes, 6 colors, liquid and paste . . . Hot Process . . . Stain Waxes . . . Powdered Dance Wax . . . Polishes. Windsor packs from pint to drum—also under Private Label. Details, quotations, samples are yours for the asking.

"WE THANK all our friends whose repeated orders for a quarter-century show confidence in Windsor. We pledge continuance of high quality, fair prices, prompt service, and progressive research. We look forward to making many new friends in the next quarter-century."

JACOB KAHN, President
 LOUIS KAHN, Vice-Pres.

WINDSOR WAX COMPANY, INC.

HOBOKEN • NEW JERSEY

CANDY'S SUPREME CANDY'S DELUXE CANDY'S BRIGHT BEAUTY

EVERY DAY Candy & Company researches for and creates NEW and BETTER floor waxes . . . TODAY, it's Candy's Supreme. This wax has already met with success. A step above Bright Beauty and Deluxe, its qualities of durability, safety underfoot, ease of application and water resistance are unchallenged.

Candy's Supreme really puts weight behind the sales point about saving labor versus repeated application

of a cheap wax. Put your private brand label around this product and competition just doesn't exist. Put this wax on your hardest, toughest prospect's floors and you have a sale . . . and, YOU put money in the bank whenever you handle Candy's waxes. All three meet the demands of your customers, no matter what their specifications may be.

SOLD ONLY THROUGH DISTRIBUTORS

All of Candy's products, Candy's Supreme, Candy's Deluxe and Candy's Bright Beauty are sold only through Distributors. They are packed in attractive containers under your own label . . . sold only by you . . . never direct to the consuming trade (except in Chicago to experimental accounts essential to research). All of Candy's products are competitively priced to allow you a liberal margin of profit.

EXPERIMENTAL SAMPLES ON REQUEST

Wax Specialists for over 55 years

Candy & Company, Inc.

2515 W. 35th ST., CHICAGO

MANUFACTURERS OF PREPARED PASTE WAX, SPIRIT LIQUID PREPARED WAXES, POWDERED DANCE FLOOR WAX, CREAM FURNITURE WAX

FLOOR SCRUB SOAPS (see also Potash Soaps)

American Soap & Washoline Co., Cohoes, N. Y.
Ampion Corp., 47-02—5th St., Long Island City, N. Y.
Armour & Co., 1355 W. 31st St., Chicago
Arrow Laboratories, 236 W. North Ave., Chicago
Banner Chem. Prods. Co., 60 Elm St., Newark, N. J.
Baum's Castorine Co., Rome, N. Y.
Boston Chemical Industries, 64 E. Brookline St., Boston
Bri-Test Prods. Corp., 845 E. 138th St., New York
Buckingham Wax Co., 51-03 Van Dam St., L. I. City, N. Y.
Candy & Co., 2515 W. 35th St., Chicago
Chemical Compounding Corp., 262 Huron St., Brooklyn
Chemical Mfg. & Dist. Co., Easton, Pa.
Chem. Service Co. of Balto., Howard & West Sts. Balto.
Chemical Supply Co., Plymouth Bldg., Cleveland
Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
Clifton Chemical Co., 62 William St., N. Y.
Churchill Mfg. Co., Galesburg, Ill.
Cole Laboratories, 22-19 37th Ave., L. I. City, N. Y.
Crystal Soap & Chem. Co., 6300 State Rd., Philadelphia
Davies-Young Soap Co., Dayton, O.
Delta Chem. Co., Payson Ave., N. Y.
Eagle Soap Corp., Huntington, Ind.
Empire Chem. Prods. Co., 12 Longworth Ave., Newark, N. J.
Franklin Research Co., 5134 Lancaster Ave., Phila.
Fuld Bros., 702 S. Wolfe St., Baltimore
Gaskill Products, 9 S. Letitia St., Phila.
James Good, Inc., 2116 Susquehanna Ave., Phila.
Haag Laboratories, Inc., 140th and Seeley Ave., Blue Island, Ill.
Harley Soap Co., Pierce & Orthodox Sts., Philadelphia
Higley Chemical Co., Dubuque, Iowa
Hockwald Chem. Co., 135 Mississippi St., San Francisco
Hubman Supply Co., 225 N. 4th St., Columbus, O.
Hysan Prods. Co., 932 W. 38th Place, Chicago
J. F. Kerns Chem. Prods., 2239 S. Michigan Ave., Chicago
Kranich Soap Co., 60 Richards St., Brooklyn
Lanair Chem. Corp., 236 W. North Ave., Chicago
Lewis Soap & Chem. Co., 383 Seventh St., Oakland, Calif.
Lorenz Chem. Co., 135 N. 32nd Ave., Omaha
Los Angeles Soap Co., 617 E. 1st St., Los Angeles
M. & H. Laboratories, 2705 Archer Ave., Chicago
Midland Labs., Dubuque, Iowa
Multi-Clean Prods., 2277 Ford Pkwy., St. Paul
Mutual Chem. & Supply Co., 257 W. Gay St., Columbus, Ohio
Nopco Chem. Co., Harrison, N. J.
N. Y. Soap Co., 258 Third St., Brooklyn
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Oil-Kraft, Inc., 3330 Beekman St., Cincinnati
Procter & Gamble Co., Cincinnati
Puritan Chem. Co., Atlanta, Ga.
Puritan Soap Co., 573 Lyell Ave., Rochester, N. Y.
R. G. A. Laboratories, 145 W. 45th St., N. Y.
Rex-Cleanwall Corp., Brazil, Ind.
Theo. B. Robertson Prods. Co., 700 W. Division St., Chicago
Rochester Germicide Co., Rochester, N. Y.
Sanitary Soap Co., 104 Railroad Ave., Paterson, N. J.
Schaeffer Bros. & Powell Mfg. Co., 102 Barton St., St. Louis
Skotch Prods. Corp., 2710 Detroit Ave., Cleveland
E. B. Snyder Labs., 2137 E. Harold St., Philadelphia
Solshine Mfg. Co., 412—2nd St., Fall River, Mass.
S. S. Stafford, Inc., 603 Washington St., N. Y.
John T. Stanley Co., 642 W. 30th St., N. Y.
Superior Soap Corp., 121 Nostrand Ave., Brooklyn
Swift & Co., Chicago
Tech. Soap Mfg. Co., 125 W. 46th Pl., Chicago
Texol Chemical Works, 3 Winter St., Worcester, Mass.
Thompson-Hayward Chem. Co., Kansas City, Mo.
J. A. Tumbler Labs., 423 Hanover St., Baltimore
Twi-Laq Chemical Co., 25 N. Portland Ave., Bklyn.
Ultra Chem. Wks., Box 1536, Paterson, N. J.
Uncle Sam Chem. Co., 573 W. 131st St., N. Y.
U. S. Sanitary Spec. Corp., 435 S. Western Ave., Chicago
James Varley & Sons, 1200 Switzer Ave., St. Louis
Victory Soap & Chem. Co., 252 Third St., Bklyn.
T. F. Washburn Co., 2244 Elston Ave., Chicago

Windsor Wax Co., 611 Newark St., Hoboken, N. J.
G. H. Wood & Co., Toronto, Ont., Canada

FLOOR WAXES

American Wax Co., 13-26 128th St., College Point, L. I.
Ampion Corp., 47-02—5th St., Long Island City, N. Y.
Antiseptol Co., 5524 Northwest Highway, Chicago
Banner Chemical Products Co., 60 Elm St., Newark, N. J.
Baums Castorine Co., 200 Mathew St., Rome, N. Y.
Boston Chemical Industries, 64 E. Brookline St., Boston
Bri-Test Prods. Corp., 845 E. 138th St., New York
Buckingham Wax Corp., Van Dam St., & Borden Ave., L. I. City, N. Y.
Candy & Co. 2515 W. 35th St., Chicago
Cary Mfg. Co., 4917 E. Michigan St., Indianapolis
Chemical Compounding Corp., 262 Huron St., Brooklyn
Chemical Service Co., Baltimore
Chemical Mfg. Dist. Co., Easton, Pa.
Chemical Supply Co., Plymouth Bldg., Cleveland
Chicago Sanitary Prods. Co., 3100 Throop St., Chicago
Churchill Mfg. Co., Galesburg, Ill.
Clifton Chemical Co., 62 William St., N. Y.
Davies-Young Soap Co., Dayton, O.
Delta Chem. Co., 4 Payson Ave., N. Y.
Dri-Brite, Inc., 4443 Cook Ave., St. Louis
E. I. du Pont de Nemours & Co., Wilmington, Del.
Eagle Soap Corp., Huntington, Ind.
Economics Laboratory, St. Paul
Empire Chemical Prods. Co., 10 Longworth St., Newark, N. J.
Federal Varnish Division, S. Ashland Ave. at 29th St., Chicago
Fox Lake Wax Co., Fox Lake, Ill.
Franklin Research Co., 5134 Lancaster Ave., Phila.
Fuld Bros., 702 S. Wolfe St., Baltimore
James Good, Inc., 2116 Susquehanna Ave., Phila.
Harley Soap Co., Pierce & Orthodox Sts., Phila.
Higley Chemical Co., Dubuque, Iowa
Hockwald Chem. Co., 135 Mississippi St., San Francisco
Arnold Hoffman Co., Providence, R. I.
R. M. Hollingshead Corp., Camden, N. J.
Hubman Supply Co., 225 N. 4th St., Columbus, O.
Hunt Mfg. Co., Lisbon Rd., Cleveland
Hysan Prods. Co., 932 W. 38th Place, Chicago
Jones Products, 167 Second St., Cambridge, Mass.
J. F. Kerns Chem. Prods., 2239 S. Michigan Ave., Chicago
H. Krevit & Co., 11 Albert St., New Haven, Conn.
La Maison Prods., Inc., 80 York St., Brooklyn
Lewis Soap & Chem. Co., 383 Seventh St., Oakland, Calif.
Manhattan Kreole Prods., 172 N. 10th St., Brooklyn
Midland Labs., Dubuque, Iowa
M. & H. Laboratories, 2703 Archer Ave., Chicago
Multi-Clean Prods., 2277 Ford Pkwy., St. Paul
Mutual Chem. & Supply Co., 257 W. Gay St., Columbus, Ohio
Oil Specialties & Refining Co., 18 Bridge St., Bklyn.
Oil-Kraft, Inc., 3330 Beekman St., Cincinnati
Peck's Prods., 610 E. Clarence Ave., St. Louis
Perrow Chemical Co., Hurt, Va.
Puritan Chem. Co., Atlanta, Ga.
R. G. A. Laboratories, 145 W. 45th St., N. Y.
Rex-Cleanwall Corp., Brazil, Ind.
Theo. B. Robertson Prods. Co., 700 W. Division St., Chicago
Sanitary Soap Co., 104 Railroad Ave., Paterson, N. J.
Schaeffer Bros. & Powell Mfg. Co., 102 Barton St., St. Louis
Seaboard Distributors, 60 Park Pl., Newark, N. J.
Shawmut Specialty Co., 313 Centre St., Boston
Slick-Shine Co., 207 Astor St., Newark, N. J.
Solshine Mfg. Co., 412—2nd St., Fall River, Mass.
L. Sonneborn Sons, 88 Lexington Ave., N. Y.
S. S. Stafford, Inc., 603 Washington St., N. Y.
Standard Oil Co. (Calif.), 225 Bush St., San Francisco
Standard Oil Co. (Ind.), 910 S. Michigan Ave., Chicago
H. F. Staples Co., Medford, Mass.
Superior Soap Corp., 121 Nostrand Ave., Brooklyn
Texas Soap Mfg. Corp., 3905 Calhoun Rd., Houston
Texol Chem. Wks., 3 Winter St., Worcester, Mass.
Trio Chem. Wks., 341 Scholes St., Bklyn.
J. A. Tumbler Labs., 423 Hanover St., Baltimore
Twi-Laq Chemical Co., 25 N. Portland Ave., Brooklyn

FLOOR WAXES (Contd.)

Twin City Shellac Co., 340 Flushing Ave., Brooklyn
Ultra Chem. Wks., 2 Wood St., Paterson, N. J.
Uncle Sam Chem. Co., 573 W. 131st St., N. Y.
U. S. Sanitary Specialties Corp., 435 Western Ave., Chicago
Universal Chem. Corp., Akron, O.
Victory Chem. Co., 148 Fairmount Ave., Phila.
Victory Soap & Chem. Co., 252 Third St., Bklyn.
T. F. Washburn Co., 2244 Elston Ave., Chicago
Wilco Co., 6800 McKinley Ave., Los Angeles
Windsor Wax Co., Inc., 611 Newark St., Hoboken, N. J.
G. H. Wood & Co., Toronto, Canada

FLOTATION OILS

Antara Prods. Div., Gen. Aniline & Film Corp., 444 Madison Ave., N. Y.
Armour & Co., 1355 W. 31st St., Chicago
Atlantic Refining Co., 260 S. Broad St., Phila.
Barrett Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Carbide & Carbon Chemicals Corp., 30 E. 42nd St., N. Y.
Cliffs Dow Chemical Co., Marquette, Mich.
Crosby Chemicals, Inc., DeRidder, La.
Darling & Co., 4201 S. Ashland Ave., Chicago
Disco Co., Oliver Bldg., Pittsburgh
E. I. du Pont de Nemours & Co., Wilmington, Del.
Emery Industries, 4300 Carew Tower, Cincinnati
Glidden Co., Southern Pine Chem. Co. Div., Jacksonville, Fla.
A. Gross & Co., 295 Madison Ave., N. Y.
Hardwood Chemical Co., 2 Jersey St., Buffalo, N. Y.
Hercules Powder Co., Wilmington
Industrial Chem. Sales Div., West Va. Pulp & Paper Co., 230 Park Ave., N. Y.
Koppers Co., Koppers Bldg., Pittsburgh, Pa.
National Aniline Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Newport Industries, Inc., 230 Park Ave., N. Y.
Reilly Tar & Chemical Corp., Indianapolis, Ind.
Republic Chemical Co., 94 Beekman St., N. Y.
Sherwood Refining Co., Englewood, N. J.
L. Sonneborn Sons, Inc., 88 Lexington Ave., N. Y. C.
Tennessee Eastman Corp., Kingsport, Tenn.
Union Bag & Paper Corp., 233 Bdw., N. Y.
Woburn Chemical Corp., Harrison, N. J.

FLUORIDES

(see also Dealers)

Aluminum Co. of America, Gulf Bldg., Pittsburgh
American Cyanamid & Chem. Corp., 30 Rockefeller Plaza, N. Y.
American Fluoride Corp., 151 W. 19th St., N. Y.
Blockson Chemical Co., Joliet, Ill.
Croton Chem. Corp., 114 Liberty St., N. Y.
E. I. du Pont de Nemours & Co., Wilmington, Del.
Foote Mineral Co., 1609 Summer St., Philadelphia
General Chemical Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Harshaw Chemical Co., 1945 97th St., Cleveland
Innis, Speiden & Co., 117 Liberty St., N. Y.
Lindsay Light & Chem. Co., West Chicago, Ill.
Merck & Co., Rahway, N. J.
Penna. Salt Mfg. Co., 1000 Widener Bldg., Phila.
Pfaltz & Bauer, 350 Fifth Ave., N. Y.
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Henry Sundheimer, Inc., 103 Park Ave., N. Y.
Jos. Turner & Co., Ridgefield, N. J.

FLYPAPER and RIBBONS

Russell Sales & Mfg. Co., 15 Park Row, N. Y.
Tanglefoot Co., Grand Rapids, Mich.
R. E. Tongue & Bro., Alleghany and Amber Sts., Phila.

FLY SPRAYS (see Household Insecticide Sprays)

FOAMING AGENTS (see Saponin; also Detergents, Synthetic; also Wetting Agents)

FOOT BATHS (Rubber)

U. S. Rubber Co., Market & South Sts., Passaic, N. J.

FORMALDEHYDE

(see also Brokers and Dealers)

American-British Chemical Supplies, 180 Madison Ave., N. Y.
American Cyanamid & Chem. Corp., 30 Rockefeller Plaza, N. Y.
Cliffs-Dow Chem. Co., Marquette, Mich.
Delta Chem. & Iron Co., Wells, Mich.
E. I. du Pont de Nemours & Co., Wilmington, Del.
Wm. S. Gray Co., 342 Madison Ave., N. Y.
Hercules Powder Co., Wilmington, Del.
Heyden Chem. Co., 393 7th Ave., N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Mallinckrodt Chemical Work, St. Louis, Mo.
Merck & Co., Rahway, N. J.
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Jos. Turner & Co., Ridgefield, N. J.

FORMALDEHYDE CANDLES

Bauer & Black, Chicago
Cenol Co., 4250 N. Pulaski Ave., Chicago
Depree Chem. Co., Holland, Mich.

FRAMES (Soap)

Houchin Machinery Co., Hawthorne, N. J.
Huber Machine Co., 259 49th St., Brooklyn
Littleford Bros., 451 E. Pearl St., Cincinnati
Newman Tallow & Soap Mach. Co., 1051 W. 35th St., Chicago
Stein Equipment Co., 90 West St., N. Y. (Used)

FREON—(Dichloro-difluoro-methane)

Kinetic Chemicals, Inc., Wilmington 98, Del.

FULLERS EARTH

American Colloid Co., 363 W. Superior St., Chicago
30 Rockefeller Plaza, N. Y.
American Cyanamid & Chem. Corp., Atlantic Refining Co., 260 S. Broad St., Philadelphia
Attapulugus Clay Co., 210 W. Washington Sq., Phila.
Chas. B. Chrystal Co., 53 Park Pl., N. Y.
Filtrol Corp., 634 S. Spring St., Los Angeles
Floridin Co., 200 Liberty St., Warren, Pa.
Fullers Earth Co., 2049 E. 100th St., Cleveland
Hammill & Gillespie, 225 Broadway, N. Y.
Harshaw Chemical Co., 1945 E. 97th St., Cleveland
Industrial Chem. Sales Div., West Va. Pulp & Paper Co., 230 Park Ave., N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Jas. H. Rhodes & Co., 157 W. Hubbard St., Chicago
L. A. Salomon & Bro., 216 Pearl St., N. Y.
Sinclair Refining Co., East Chicago, Ind.
Standard Oil Co. (Ind.), 910 S. Michigan Ave., Chicago
A. E. Starkie Co., 5461 W. Division St., Chicago
Tamms Silica Co., 228 N. La Salle St., Chicago
United Clay Mines Corp., 101 Oakland St., Trenton, N. J.
Chas. A. Wagner Co., 813 Callowhill St., Phila.
Welch, Holme & Clark Co., 439 West St., N. Y.
Whittaker, Clark & Daniels, 260 W. Broadway, N. Y.

FUMIGANTS (Cyanides, Chlorpicrin, Methyl Bromide, etc.)

American Cyanamid & Chem. Corp., 30 Rockefeller Plaza, N. Y.
Carbide & Carbon Chemicals Corp., 30 E. 42nd St., N. Y.
Commercial Solvents Corp., 17 E. 42nd St., N. Y.

FUMIGANTS (Contd.)

Dow Chemical Co., Midland, Mich.
E. I. du Pont de Nemours & Co., Wilmington, Del.
Eston Chemicals, Inc., 3100 E. 26th St., Los Angeles
Innis, Speiden & Co., 117 Liberty St., N. Y.
Kay-Fries Chemicals, Inc., 180 Madison Ave., N. Y.
Mechling Bros. Chemical Co., Camden, N. J.
Michigan Chem. Corp., St. Louis, Mich.
Penn. Salt Mfg. Co., Widener Bldg., Phila.
Rohm & Haas Co., Inc., 222 W. Washington Sq., Philadelphia
Stauffer Chem. Co., 420 Lexington Ave., N. Y.
U. S. Industrial Chemicals, Inc., 60 E. 42nd St., N. Y.
Westvaco Chlorine Prods. Co., 405 Lexington Ave., N. Y.
Wyandotte Chem. Corp., Wyandotte, Mich.

GAS MASKS

Davis Emergency Equip. Co., 43 Halleck St., Newark, New Jersey
Mine Safety Appliances Co., Braddock, Thomas & Meade Sts., Pittsburgh, Pa.

GAUGES (see Instruments)

GERANIOL (see Aromatic Chemicals)

GERANIUM OIL (see Essential Oils)

GERANYL ACETATE (see Aromatic Chemicals)

GLASS BOTTLES and JARS (see Bottles)

GLASS and WINDSHIELD CLEANERS

Albert Albek, Inc., 515 S. Fairfax, Los Angeles
Ampion Corp., 47-02—5th St., Long Island City, N. Y.
An-Fo Mfg. Co., 3129 Elmwood Ave., Oakland, Calif.
Baird & McGuire, Inc., Holbrook, Mass.
Barton Chem. Co., 3907 S. Langley Ave., Chicago
Buck-Jack Co., 3056 Federal St., Baltimore
Chemical Mfg. & Dist. Co., Easton, Pa.
Churchill Mfg. Co., Galesburg, Ill.
Clifton Chemical Co., 62 William St., N. Y.
Cole Labs., 22-19—37th Ave., Long Island City.
Delta Chem. Co., 4 Payson Ave., N. Y.
Fuld Bros., 702 S. Wolfe St., Baltimore
James Good, Inc., Kensington, Phila.
Goulard & Olena, Inc., 140 Liberty St., N. Y.
Higley Chemical Co., Dubuque, Iowa
Hockwald Chem. Co., 135 Mississippi St., San Francisco
R. M. Hollingshead Corp., Camden, N. J.
Hysan Prods. Co., 932 W. 38th Place, Chicago
Imperial Prods. Co., 1600 Fountain St., Phila.
Industrial Labs., 17-19 W. Conway St., Baltimore
Kemiko Mfg. Co., 500 Chancellor Ave., Irvington, N. J.
Kinner Prods. Co., Pataskala, Ohio
Lewis Soap & Chem. Co., Oakland, Calif.
Lorenz Chemical Co., 135 N. 32nd Ave., Omaha
Manhattan Kreole Prods., 172 N. 10th St., Brooklyn
M. Michel & Co., 90 Broad St., N. Y.
Midland Labs., Dubuque, Ia.
M. & H. Laboratories, 2703-5 Archer Ave., Chicago
Nopco Chem. Co., Harrison, N. J.
Puritan Chem. Co., Atlanta
Theo. B. Robertson Prods. Co., 700 W. Division St., Chicago
Skotch Prods. Corp., 2710 Detroit Ave., Cleveland
Solshine Mfg. Co., 44 Brookline St., Cambridge, Mass.
John Sunshine Chem. Co., 604 W. Lake St., Chicago
Transmotive Labs., 2550 S. Michigan Ave., Chicago
Uncle Sam Chemical Co., 573 W. 131st St., St. N. Y. C.
U. S. Sanitary Spec. Corp., 435 S. Western Ave., Chicago
Universal Chlorinator Co., 3418 W. Pico Blvd., Los Angeles
Wilco Co., 6800 McKinley Ave., Los Angeles

GLUES (see Adhesives)

GLYCERINE (Refined)

Armour & Co., 1355 W. 31st St., Chicago
Century Stearic Acid Candle Wks., 41 E. 42nd St., N. Y.
Colgate-Palmolive-Peet Co., Jersey City, N. J.
E. F. Drew & Co., Wecoline Div., Boonton, N. J.
Garrigues, Stewart & Davies, Inc., 40 Rector St., N. Y.
A. Gross & Co., 295 Madison Ave., N. Y.
W. C. Hardesty Co., 41 E. 42nd St., N. Y.
Harshaw Chemical Co., 1945 E. 97th St., Cleveland
Lever Bros. Co., Cambridge, Mass.
Los Angeles Soap Co., Los Angeles, Calif.
Merck & Co., Rahway, N. J.
Nopco Chem. Co., Harrison, N. J.
Leo Pasternak, 110 William St., N. Y. (Brokers)
Procter & Gamble Co., Cincinnati
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
C. J. Schellings & Co., 251 Pearl St., N. Y. (Brokers)
Swift & Co., Union Stock Yards, Chicago
Arthur C. Trask Co., 4103 S. La Salle St., Chicago
M. Werk Co., St. Bernard, Cincinnati
Allen B. Wrisley Co., 6801 West 65th St., Chicago

GLYCERINE PLANTS AND EQUIPMENT

E. B. Badger Co., 25 Pitts St., Boston
William Garrigue & Co., 9 S. Clinton St., Chicago
Alan Porter Lee, Inc., 150 Broadway, N. Y.
Ernest Scott & Co., Fall River, Mass.
Swenson Evaporator Co., Harvey, Ill.
Wurster & Sanger, 5201 S. Kenwood Ave., Chicago

GREASES (See Tallow)

GREASES, LUBRICATING (see Petroleum Bases)

GREEN SOAP (see Potash Soap)

GRINDING MACHINERY (for milling, pulverizing, etc.)

Abbe Engineering Co., 50 Church St., N. Y.
American Pulverizer Co., 18th & Austin Sts., St. Louis
Allied Steel & Equip. Co., 1007 Springfield Ave., Irvington, N. J.
C. O. Bartlett & Snow Co., 6200 Harvard Ave., Cleveland
Consolidated Prods. Co., 15 Park Row, N. Y. (Used)
J. H. Day Co., 1144 Harrison Ave., Cincinnati
First Machy. Corp., 157 Hudson St., N. Y. (Used)
Gruendler Patent Crusher & Pulverizer Co., 900 N. First St., St. Louis
B. F. Gump Co., 412 S. Clinton St., Chicago
Houchin Machy. Co., Hawthorne, N. J.
Huber Machine Co., 259 46th St., Brooklyn
Kent Machine Works, 39 Gold St., Brooklyn
Lancaster Iron Works, Lancaster, Pa.
J. M. Lehmann Co., Lyndhurst, N. J.
Newman Tallow & Soap Mach. Co., 1051 W. 35th St., Chicago (Used)
Olsen & Tilgner Mfg. Co., 2276 Elston Ave., Chicago
H. K. Porter Co., 49th & Harrison Sts., Pittsburgh
Prater Pulverizer Co., 1829 S. 55th Ave., Chicago
Pulverizing Machinery Co., Chatham Rd., Summit, N. J.
Chas. Ross & Sons, 150 Classon Ave., Brooklyn
Patterson Foundry & Machine Co., East Liverpool, Ohio
Sprout Waldron & Co., Muncy, Pa.
Stein Equipment Co., 90 West St., N. Y. (Used)
Stephens-Adamson Mfg. Co., Aurora, Ill.
F. J. Stokes Machine Co., Philadelphia, Pa.
Sturtevant Mill Co., Harrison Sq., Boston
Williams Patent Crusher & Pulverizer Co., St. Louis

GUMS

Albert Albek, Inc., 515 S. Fairfax Ave., Los Angeles
American Cyanamid & Chem. Corp., 30 Rockefeller Plaza, N. Y.
C. W. Campbell Co., 157 Chambers St., N. Y.
Consumers Import. Co., 350 Fifth Ave., N. Y.
T. G. Cooper & Co., Cedar & Venango Sts., Philadelphia
Wm. Diehl & Co., 336 W. 42nd St., N. Y. 18
Dodge & Olcott, Inc., 180 Varick St., N. Y.
R. Gesell, Inc., 200 W. Houston St., N. Y.
Gillespie-Rogers-Pyatt, Ltd., 80 John St., N. Y.

1918=====1948

30 years of good soaps

*an important record of service
to an important industry*

Our past has been steady growth and expansion in the manufacture of quality soaps and detergents. Our future is a promise—a promise of continued fine products and service to you.

✓ Check this list—

a product to meet your every need

- Pure and Clear Coco Liquid Soaps
- Vegetable Oil Soap Bases
- Liquid Scrubbing Soaps
- Special Liquid Cleaners
- Disinfectants
- Soap Powders
- Bar Soaps
- Dishwashing Compounds
- Powdered and Flake Soaps
- Synthetic Detergents

Standardized, Dependable Soaps and Detergents

We Specialize in Sales to the Jobber



Peck's PRODUCTS
COMPANY

610 E. CLARENCE AVE. ST. LOUIS 15, MO.

GUMS (Contd.)

Industrial Raw Materials Corp., 52 Wall St., N. Y.
 J. L. Hopkins & Co., 220 Broadway, N. Y.
 O. G. Innes Corp., 82 Wall St., N. Y.
 Innis, Speiden & Co., 117 Liberty St., N. Y.
 George H. Lincks, 165 John St., N. Y.
 National Starch Products, Inc., 270 Madison Ave., N. Y.
 Neuman-Buslee & Wolfe, 224 W. Huron St., Chicago
 Orbis Products Corp., 215 Pearl St., N. Y.
 S. B. Penick & Co., 50 Church St., N. Y.
 R. J. Prentiss & Co., 110 William St., N. Y.
 J. H. Redding, Inc., 17 Battery Place, N. Y.
 R. F. Revson Co., 144 W. 18th St., N. Y.
 Rohm & Haas Co., 222 W. Washington Sq., Philadelphia
 Rosenthal-Bercow Co., 25 East 26th St., N. Y.
 William H. Scheel, Inc., 88 Franklin St., Bklyn.
 Stein Hall & Co., 285 Madison Ave., N. Y.
 Thurston & Bradich, 286 Spring St., N. Y.
 Arthur C. Trask Co., 4102 S. La Salle St., Chicago
 U. S. Industrial Chemicals, Inc., Lincoln Bldg., N. Y.
 Welch, Holme & Clark Co., 563 Greenwich St., N. Y.

GUMS, FUSED CONGO

Gillespie-Rogers-Pyatt, Ltd., 80 John St., N. Y.
 O. G. Innes Corp., 82 Wall St., N. Y.
 S. B. Penick & Co., 50 Church St., N. Y. C.
 U. S. Industrial Chemicals, Inc., Lincoln Bldg., N. Y.

GYM-FINISH FLOOR SEAL (see Floor Finishes)

HAND (Mechanic's) SOAP

Ampion Corp., 4-88 47th Ave., Long Island City, N. Y.
 Antara Prods. Div., Gen. Aniline & Film Corp., 444
 Madison Ave., N. Y.
 Antiseptol Co., 5524 Northwest Highway, Chicago
 Armour & Co., 1355 W. 31st St., Chicago
 Baums Castorine Co., 200 Mathew St., Rome, N. Y.
 Buck-Jack Co., 3056 Federal St., Baltimore
 Chem. Mfg. & Dist. Co., Easton, Pa.
 Chem. Service Co. of Balto., Howard & West Sts., Balto.
 Chemical Supply Co., Plymouth Bldg., Cleveland
 Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
 Churchill Mfg. Co., Galesburg, Ill.
 Colgate-Palmolive-Peet Co., Jersey City, N. J.
 Columbia Soap & Chem. Co., Inc.,
 324 Leavenworth St., San Francisco
 Crystal Soap & Chem. Co., 6300 State Rd., Philadelphia
 Cudahy Packing Co., 221 N. La Salle St., Chicago
 Davies Young Soap Co., Dayton, O.
 Delta Chemical Co., 4 Payson Ave., N. Y.
 Eagle Soap Corp., Huntington, Ind.
 J. Eavenson & Sons, Del. & Penn Sts., Camden, N. J.
 A. C. Fergusson Co., Drexel Bldg., Phila.
 Flash Chem. Co., 160 2nd St., Cambridge, Mass.
 Fuld Bros., 702 S. Wolfe St., Baltimore
 Gaylord Chem. Co., 701 Woodswether Rd., Kansas City,
 Mo.
 L. E. Hicks & Son, 507 S. Grove Ave., Oak Park, Ill.
 Higley Chem. Co., Dubuque
 Hockwald Chem. Co., 135 Mississippi St., San Francisco
 Arnold Hoffman Co., Providence, R. I.
 R. M. Hollingshead Co., Camden, N. J.
 Hubman Supply Co., 225 N. 4th St., Columbus, O.
 Hysan Prods. Co., 9332 W. 38th Place, Chicago
 Imperial Prods. Co., 1600 Fountain St., Phila.
 Insto Co., 110 Center St., Los Angeles
 J. Chemical Works, 602 W. 37th St., N. Y.
 Jansen Soap & Chemical Co., 324 Leavenworth St.,
 San Francisco, Cal.
 J. F. Kerns Chem. Prods., 2239 S. Michigan Ave.,
 Chicago
 Lorenz Chem. Co., 135 N. 32nd Ave., Omaha
 Los Angeles Soap Co., 617 E. First St., Los Angeles
 Luxury Soap Co., 165 Augusta St., Irvington, N. J.
 Mione Mfg. Co., Collingdale, Pa.
 National Sanitary Prods. Co., 217 N. 2nd St., St. Louis
 North Coast Soap & Chem. Wks., Seattle, Wash.
 Peck's Prods. Co., 610 E. Clarence Ave., St. Louis

NATURAL

GUMS

Accroides	Batu
Boea	Congo
Damar	East India
Elemi	Hiroe
Loba	Manila
Mastic	Pontianak
Sandarac	Yacca

MANILA COPAL

CONGO COPAL

and

PROCESSED

RESINS

for

NON-RUBBING

FLOOR WAXES

O. G. INNES CORPORATION

82 WALL STREET
 NEW YORK 5, N. Y.

TELEPHONE:
 HANover 2-7450

HAND (Mechanic's) SOAP (Contd.)

Procter & Gamble Co., Cincinnati
Puritan Chem. Co., Atlanta, Ga.
Puritan Soap Co., 573 Lyell Ave., Rochester, N. Y.
Theo. B. Robertson Prods. Co., 700 W. Division St., Chicago
Sanitary Soap Co., 104 Railroad Ave., Paterson, N. J.
Schmidt Soap Products Co., 236 W. North Ave., Chicago
Skat Co., Hartford, Conn.
Skotch Prods. Corp., 2710 Detroit Ave., Cleveland
John T. Stanley Co., 642 W. 30th St., N. Y.
Superior Soap Corp., 121 Nostrand Ave., Brooklyn
Swift & Co., Chicago
Texas Soap Mfg. Corp., 4905 Calhoun Rd., Houston
Trio Chem. Wks., 341 Scholes St., Bklyn.
J. A. Tumbler Labs., 423 Hanover St., Baltimore
United Cleanser Mfg. Co., Cambridge, Mass.
U. S. Sanitary Spec. Corp., 435 S. Western Ave., Chicago
Utility Co., 636 W. 44th St., N. Y.
Vanco Co., Manchester, Conn.
Vliet Soap Co., 638 Monroe St., Brooklyn
Washine-National-Sands, Inc., 37-02 Northern Blvd., Long Island City.
G. H. Wood & Co., Toronto, Ont., Canada

HAND SOAP, Powdered

Ampion Corp., 4-88 47th Ave., Long Island City, N. Y.
Armour & Co., 1355 W. 31st St., Chicago
Banner Chemical Products Co., 60 Elm St., Newark, N. J.
Bauma Castorine Co., 200 Mathew St., Rome, N. Y.
Boston Chemical Industries, 64 E. Brookline St., Boston
Cenol Co., 4250 N. Pulaski Ave., Chicago
Chemical Mfg. & Dist. Co., Easton, Pa.
Chem. Service Co. of Balto., Howard & West Sts., Balto.
Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
Churchill Mfg. Co., Galesburg, Ill.
Clifton Chemical Co., 62 William St., N. Y.
Crystal Soap & Chem. Co., 6300 State Rd., Phila.
Eagle Soap Corp., Huntington, Ind.
J. Eavenson & Sons, Camden, N. J.
Essential Chemicals, 3286 N. 33rd St., Milwaukee
Fuld Bros., 702 S. Wolfe St., Baltimore
Gaylord Chem. Co., 701 Woodswether Rd., Kansas City, Mo.
L. E. Hicks & Son, 507 S. Grove Ave., Oak Park, Ill.
Kaskill Products, 9 Letitia St., Phila.
Hockwald Chem. Co., 135 Mississippi St., San Francisco
R. M. Hollingshead Co., Camden, N. J.
Hubman Supply Co., 225 N. 4th St., Columbus, O.
Hysan Prods. Co., 932 W. 38th Place, Chicago
Imperial Prods. Co., 1600 Fountain St., Phila.
Insto Co., 110 Center St., Los Angeles
J. F. Kerns Chem. Prods., 2239 S. Michigan Ave., Chicago
La Maison Products, Inc., 80 York St., Brooklyn
M. & H. Laboratories, 2705 Archer Ave., Chicago
Mackenzie Laboratories, Front & Yarnell, Chester, Pa.
Nopco Chemical Co., Harrison, N. J.
Packwood Mfg. Co., St. Louis
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Port Huron Detergent Co., Port Huron, Mich.
Presto Mfg. Co., Myrtle and Curfew Sts., St. Paul, Minn.
Procter & Gamble Co., Cincinnati
Puritan Chem. Co., Atlanta
Puritan Soap Co., 573 Lyell Ave., Rochester, N. Y.
R. G. A. Laboratories, 145 W. 45th St., N. Y.
Theo. B. Robertson Prods. Co., 700 W. Division St., Chicago
Rochester Germicide Co., Rochester, N. Y.
Sanitary Soap Co., 104 Railroad Ave., Paterson, N. J.
Skotch Prods. Corp., 2710 Detroit Ave., Cleveland
E. B. Snyder Labs., 2137 E. Harold St., Philadelphia
John T. Stanley Co., 642 W. 30th St., N. Y.
Superior Soap Corp., 121 Nostrand Ave., Brooklyn
Swift & Co., Chicago
Texas Soap Mfg. Corp., 4905 Calhoun Rd., Houston
Trio Chem. Wks., 341 Scholes St., Bklyn.
U. S. Sanitary Specialties Corp., 435 S. Western Ave., Chicago
Utility Co., 636 W. 44th St., N. Y.
Warren Soap Mfg. Co., Cambridge, Mass.
G. H. Wood & Co., Toronto, Canada
Allen B. Wrisley Co., 6801 W. 65th St., Chicago

HARD WATER SOAPS (Salt Water Soaps)

Armour Soap Wks., 1355 W. 31st St., Chicago
Baum's Castorine Co., Rome, N. Y.
Carlstadt Chem. Co., Carlstadt, N. J.
Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
James Counts Soap Co., 2nd & Washington Aves., St. Louis
Cudahy Packing Co., 221 N. LaSalle St., Chicago
James Good, Inc., 2116 Susquehanna Ave., Phila.
Harley Soap Co., Pierce & Orthodox Sts., Phila., Pa.
Haskins Bros. & Co., Omaha, Neb.
Hewitt Soap Co., Dayton, Ohio
Higley Chemical Co., Dubuque, Iowa
Jansen Soap & Chemical Co., 324 Leavenworth St., San Francisco, Calif.
Los Angeles Soap Co., Los Angeles, Calif.
Nopco Chem. Co., Harrison, N. J.
National Soap Co., 357 South 25th St., Tacoma, Wash.
Newell Guttradt Co., 350 Fremont St., San Francisco, Cal.
North Coast Soap & Chem. Works, Seattle, Wash.
Peck's Prod. Co., 620 E. Clarence Ave., St. Louis
Procter & Gamble Co., Cincinnati
Theo. B. Robertson Prods. Co., 700 W. Division St., Chicago
Schmidt Soap Products Co., 236 W. North Ave., Chicago
John T. Stanley Co., 642 W. 30th St., N. Y.
Swift & Co., Union Stock Yards, Chicago
Texas Soap Mfg. Corp., 4905 Calhoun Rd., Houston.
Vliet Soap Co., 638 Monroe St., Brooklyn
Warren Soap Mfg. Co., Cambridge, Mass.
M. Werk Co., St. Bernard, Cincinnati
Allen B. Wrisley Co., 6801 W. 65th St., Chicago, Ill.
Chas. W. Young & Co., 1247 N. 26th St., Philadelphia

HELIOTROPIN (See Aromatic Chemicals)

HEXAETHYL TETRAPHOSPHATE

Eston Chemicals, Inc., 3100 E. 26th St., Los Angeles, Cal.
Monsanto Chemical Co., 1700 S. 2nd St., St. Louis
John Powell & Co., 1 Park Ave., N. Y.
R. J. Prentiss & Co., 110 William St., N. Y.
Victor Chemical Works, 141 Jackson Blvd., Chicago, Ill.

HOLDERS (Deodorizing Block)

(see also Cans, Fibre)

Chemical Mfg. & Dist. Co., Easton, Pa.
Chemical Service of Baltimore, Howard & West Sts., Baltimore
Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
Cin-Made Corp. (fibre), 294 Eggleston Ave., Cincinnati
Eagle Soap Corp., Huntington, Ind.
Edelman Co., 6249 S. St. Lawrence Ave., Chicago
Elkay Products Corp., 323 W. 16th St., N. Y.
Fuld Bros., 702 S. Wolfe St., Baltimore
Garnet Chem. Corp., 911 N. Lumber St., Allentown, Pa.
Hockwald Chem. Co., 135 Mississippi St., San Francisco
Hysan Prods. Co., 932 W. 38th Place, Chicago
Jansen Soap & Chemical Co., 324 Leavenworth St., San Francisco, Cal.
National Sanitary Chem. Co., Baltimore, Md.
Theo. B. Robertson Prods. Co., 700 W. Division St., Chicago
Rochester Germicide Co., 16 Downing Pl., Rochester N. Y.
Uncle Sam Chemical Co., 573 W. 131st St., St. N. Y. C.
U. S. Sanitary Specialties Corp., 435 S. Western Ave., Chicago

HOMOGENIZERS (DISPERSION EQUIPMENT)

Abbe Engineering Co., 50 Church St., N. Y.
Bowser, Inc., Fort Wayne, Ind.
Eppenhach, Inc., 45-10 Vernon Blvd., Long Island City, N. Y.
Wurster & Sanger, 5201 S. Kenwood Ave., Chicago

HOUSEHOLD AMMONIA (prepared, in bulk and private brand)

Chemical Supply Co., Plymouth Bldg., Cleveland
Clifton Chemical Co., 62 William St., N. Y.
Cole Labs., 22-19—37th Ave., Long Island City
Corn King Co., Cedar Rapids, Ia.
Fergusson Laboratories, Drexel Bldg., Philadelphia
Fuld Bros., 702 S. Wolfe St., Baltimore
James Good, Inc., Kensington, Phila.
Hockwald Chem. Co., 30 Bluxome St., San Francisco
R. M. Hollingshead Corp., Camden, N. J.
Imperial Prods. Co., 1600 Fountain St., Phila.
Hysan Prods. Co., 932 W. 338th Place, Chicago
Merck & Co., Rahway, N. J.
Theo. B. Robertson Prods. Co.,
700 W. Division St., Chicago, Ill.
E. B. Snyder Labs., 2137 E. Harold St., Philadelphia
John T. Stanley Co., Inc., 642 W. 30th St., N. Y.
Thompson Hayward Chem. Co., Des Moines, Iowa
Washine-National-Sands, Inc., 37-02 Northern Blvd.,
Long Island City

HOUSEHOLD INSECTICIDE BASE (see Petroleum Bases)

HOUSEHOLD INSECTICIDES, LIQUID

Ampion Corp., 4-88 47th Ave., Long Island City, N. Y.
An-Fo Mfg. Co., 3129 Elmwood Ave., Oakland, Cal.
Antiseptol Co., 5524 Northwest Highway, Chicago
Baird & McGuire, Inc., Holbrook, Mass.
Banner Chemical Co., 60 Elm St., Newark, N. J.
Barton Chemical Co., 3907 S. Langley Ave., Chicago
Baums Castorine Co., 200 Mathew St., Rome, N. Y.
Boston Chemical Industries, 64 E. Brookline St., Boston
Brileo Labs., 947-61st St., Bklyn.
Bri-Test Prods. Corp., 845 E. 138th St., N. Y.
Cary Mfg. Co., 4917 E. Michigan St., Indianapolis
Cenol Co., 4250 N. Pulaski Ave., Chicago
Chemical Compounding Corp., 262 Huron St., Brooklyn
Chemical Mfg. & Dist. Co., Easton, Pa.
Chemical Service Co., Baltimore
Chemical Supply Co., Plymouth Bldg., Cleveland
Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
Churchill Mfg. Co., Galesburg, Ill.
Clifton Chemical Co., 62 William St., N. Y.
Columbia Soap & Chem. Co., Inc., 324 Leavenworth St.,
San Francisco
Corn King Co., Cedar Rapids, Ia.
Crystal Soap & Chem. Co., 6300 State Rd., Philadelphia
Delta Chemical Co., 4 Payson Ave., N. Y.
C. B. Dolge Co., Westport, Conn.
Eagle Soap Corp., Huntington, Ind.
Edelman Co., 6249 S. St. Lawrence Ave., Chicago
Elkay Products Co., 323 W. 16th St., N. Y.
Exterminating Materials Co., 555 W. 22nd St., N. Y.
Fairfield Labs., Inc., 417 Cleveland Ave., Plainfield, N. J.
Fuld Bros., 702 S. Wolfe St., Baltimore
Geigy Co., 89 Barclay St., N. Y.
James Good, Inc., 2116 Susquehanna Ave., Phila.
Goulard & Olena, 140 Liberty St., N. Y.
Harley Soap Co., Pierce & Orthodox Sts., Phila.
Harrison Oil Co., 5110 N. 35th St., Milwaukee
Higley Chemical Co., Dubuque, Iowa
Hockwald Chem. Co., 135 Mississippi St., San Francisco
R. M. Hollingshead Corp., Camden, N. J.
Hubman Supply Co., 225 N. 4th St., Columbus, O.
James Huggins & Son, 239 Medford St., Malden, Mass.
Hunt Mfg. Co., Lisbon Rd., Cleveland
Hysan Prods. Co., 93 W. 38th Place, Chicago
Imperial Prods. Co., 1600 Fountain St., Phila.
Industrial Management Corp., 639 S. Spring St., Los Angeles
Jansen Soap & Chemical Co., 324 Leavenworth St.,
San Francisco
Klix Chem. Co., 2460 Third St., San Francisco
Kemiko Mfg. Co., 500 Chancellor Ave., Irvington, N. J.
J. F. Kerns Chem. Prods., 2239 S. Michigan Ave.,
Chicago
Ketoid Chem. Co., 339 S. Van Deventer, St. Louis

MCCORMICK INSECTICIDES

BEE BRAND INSECT SPRAY: An excellent household spray, highly effective against flies, mosquitoes and other household insects.

BEE BRAND INSECT POWDER: Pure, finely ground pyrethrum powder for household use.

BEE BRAND INSECTICIDAL SHAMPOO: Kills fleas and lice on dogs and cats — head lice and crab lice on humans.

BEE BRAND FLEA KILLER: Active cubé derivatives with a clay base, for control of fleas and lice on animals.

BEE BRAND FLEA AND TICK KILLER: Contains 10% DDT; controls fleas and ticks on dogs, head lice and crab lice on humans.

BEE BRAND CANARY LICE POWDER: A specially compounded pyrethrum powder in puffer tins.

BEE BRAND ROACH KILLER: Highly effective for household and institutional use. To be used only as directed on package.

BEE BRAND DISINFECTANT: A highly efficient disinfectant, deodorant and fungicide. Phenol coefficient — 8 F.D.A. method.

RED ARROW GARDEN SPRAY: A highly concentrated garden spray containing Pyrethrum, Rotenone and a special soap.

RED ARROW DUST: A highly effective dust containing 3/4% Rotenone.

"SPECIAL" RED ARROW SPRAY: An extra-high-powered pyrethrum spray for Japanese Beetles, Leaf Tyers and Leaf Rollers.

WALL AND SCREEN SPRAY: Contains 5% DDT in an odorless petroleum base; for control of flies, mosquitoes and bedbugs.

WATER DISPERSIBLE POWDER: Contains 50% DDT.

EMULSION CONCENTRATE: Contains 25% DDT; to be diluted with water.

AGRICULTURAL DUST: Contains 5% DDT.

HY-GRO (13-26-13): Soluble plant food and starter solution.

McCormick & Co., Inc.

BALTIMORE 2, MARYLAND

Standardized, Dependable Chemicals for the

INSECTICIDES



• Agricultural and Household Toxicants

THE LETHANES—the pioneer synthetic contact insecticides, noted for uniformity, effectiveness and stability for more than 15 years. Now more important than ever to increase the speed of action of DDT, RHOTHANE and similar slow-acting killing agents. The LETHANES are the fastest acting toxicants per dollar of cost.

DDT AND DDT CONCENTRATES—technical DDT, also a complete line of DDT formulations for household, agricultural and industrial use. DDT concentrates are made with specially developed emulsifiers, wetting agents and diluents.

RHOTHANE—a new insecticidal toxicant effective against the same insects as is DDT, while being many times less toxic to humans and warm-blooded animals. Available as Technical RHOTHANE and in solutions, emulsions, wettable powders and dusts, combined with superior Rohm & Haas wetting agents and emulsifiers. SAFER TO USE.

• Agricultural

THE DITHANES—sprays and dusts based on these synthetic organic fungicides are widely used for effective control of many diseases of potatoes, cucurbits, tomatoes, celery and other vegetables and ornamentals.

YELLOW CUPROCIDE—an electrolytic cuprous oxide having a metallic copper equivalent of 80%. Dusts and sprays based on Yellow Cuprocide have been successfully used for years by vegetable growers in all parts of the country.

CUPRO-K—a copper fungicide especially recommended for cherry leaf spot and certain other diseases of fruits and vegetables.

• Mildew Proofers

HYAMINE 3258—a water-dispersible quaternary ammonium pentachlorophenate which is recommended as a mildew-proofing agent for leather and fabrics, general household and food storage use.

FUNGICIDES



CUPROCIDE, CUPRO-K, DITHANE, HYAMINE, LETHANE, RHOPLEX, RHOTEX, RHOTHANE, TAMOL and TRITON are trade-marks, Reg. U. S. Pat. Off.

ROHM & HAAS

Manufacturers of Chemicals including Plastics • Synthetic Insecticides • Fungicides • Enzymes • Detergents •

Insecticide and Sanitary Products Industry

• Emulsifiers, Wetting Agents, Spreaders and Conditioners

THE TRITONS—a group of surface-active agents developed especially for use in insecticidal formulations. Each of the TRITONS has distinctive characteristics of wetting, emulsifying, or dispersing to fit the need of your formulation. Write for descriptive information about these products—TRY THE TRITONS.

TAMOL N—a conditioner and dispersing agent for use with TRITON wetting agents to furnish ultra-smooth wettable powder products with outstanding suspendability.

• Detergents and Wetting Agents

THE TRITONS—a widely diversified group of surface-active agents for detergency, emulsifying, wetting or dispersing in all types of cleaners, cosmetics and similar products.

• Disinfectants and Deodorants

THE HYAMINES—quaternary ammonium salts which possess high germicidal action and deodorant properties. They are used as sanitizing agents for dishes, glassware, dairy equipment and food processing equipment, also in the preparation of various antiseptic products and veterinary disinfectants. HYAMINE is odorless yet possesses unusual deodorizing properties. SAFE TO USE.

• Auxiliary Products

RHOTEX GS—a thickening agent and emulsion stabilizer for many cosmetic and related products.

THE RHOPLEXES—water emulsions of synthetic resins which dry to form clear transparent films. Useful as an opacifier in the manufacture of cosmetics and products for the beauty parlor. Also used in the manufacture of finishing materials for floors and for semi-permanent textile finishes for home application.

SURFACE-ACTIVE AGENTS



SANITARY CHEMICALS



Branch offices: Chicago, Kansas City, Los Angeles, Oakland.

Canadian Distributor: P. N. Soden & Co. Ltd., Montreal and Toronto.

Represented by Cia. Rohm y Haas, S. R. L., Carlos Pellegrini 331, Buenos Aires, Argentina, and agents in principal South American cities.

COMPANY

WASHINGTON SQUARE
PHILADELPHIA 5, PA.



• Germicides • Chemicals for the Leather, Textile, Ceramic, Rubber, Paper, Petroleum and other Industries

HOUSEHOLD INSECTICIDES, LIQUID (Contd.)

Koppers Co., White Tar Div., Kearny, N. J.
Lakeland Labs., 625 15th St., South, Minneapolis
Lewis Soap & Chem. Co., Oakland, Calif.
Lorenz Chem. Co., 135 No. 32nd Ave., Omaha
Manhattan Kreole Prods., 172 N. 10th St., Brooklyn
Maywood Pest Exterminators, Maywood, Ill.
McCormick & Co., Baltimore, Md.
M. & H. Laboratories, 2703-5 Archer Ave., Chicago
Michigan Chem. Corp., St. Louis, Mich.
Midland Labs., Dubuque, Ia.
Midway Chemical Co., 5235 W. 65th St., Chicago
Edgar A. Murray Co., 2703 Guoin St., Detroit
Mutual Chem. & Supply Co., 257 W. Gay St., Columbus, Ohio
National Sanitary Prods. Co., 217 N. 2nd St. St. Louis
John Opitz Inc., 50-14-39th St., L. I. City
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Penna. Salt Mfg. Co., Widener Bldg., Phila.
Perrow Chem. Co., Hurt, Va.
Pest Control Supply Co., 210 N. Western Ave., Los Angeles
Puritan Chem. Co., Atlanta
Rex Research Corp., Toledo
Theo. B. Robertson Prods. Co., 700 W. Division St., Chicago
Rochester Germicide Co., Rochester, N. Y.
St. Lawrence Chem. Co., Ogdensburg, N. Y.
Schaeffer Bros. & Powell Mfg. Co., 102 Barton St., St. Louis, Mo.
Selig Co., 336 Marietta St., Atlanta, Ga.
Shell Oil Co., Inc., 50 W. 50th St., N. Y.
Sinclair Refining Co., East Chicago, Ind.
E. B. Snyder Labs., 2137 E. Harold St., Philadelphia
Solshine Mfg. Co., 44 Brookline St., Cambridge, Mass.
S. S. Stafford, Inc., 603 Washington St., N. Y.
Stanco Distributors, Inc., 216 W. 14th St., N. Y.
Standard Oil Co., of Calif., San Francisco
Standard Oil Co. (Ind.), 910 S. Michigan Ave., Chicago
Standard Oil Co. (Ohio), Midland Bldg., Cleveland
Texas Soap Mfg. Corp., 4905 Calhoun Rd., Houston
Texol Chemical Works, 3 Winter St., Worcester, Mass.
Thompson-Hayward, 2915 S. W. Blvd., Kansas City
Trio Chem. Wks., 341 Scholes St., B'klyn.
Trojan Products & Mfg. Co., 3130 S. Wabash Ave., Chicago
J. A. Tumbler Labs., 423 Hanover St., Baltimore
Ultra Chem. Wks., 2 Wood St., Paterson, N. J.
Uncle Sam Chemical Co., 573 W. 131st St., N. Y. C.
U. S. Sanitary Specialties Corp., 435 S. Western Ave., Chicago
James Varley & Sons, 1200 Switzer Ave., St. Louis
Victory Chem. Co., 148 Fairmount Ave., Philadelphia
Vliet & Co., 638 Monroe St., Brooklyn
Robert C. White Co., Chestnut Hill, Phila.
Wilco Co., 6800 McKinley Ave., Los Angeles
Whitmire Research Labs., 339 S. Vandeventer, St. Louis
G. H. Wood & Co., Toronto, Ont., Canada
York Chemical Co., 23 Dean St., B'klyn.

HOUSEHOLD INSECTICIDES PASTE, (see Phosphorus Paste, or Roach Paste)

HOUSEHOLD INSECTICIDES, POWDERED

Allaire Woodward & Co., Peoria, Ill.
Ampion Corp., 4-88 47th Ave., Long Island City, N. Y.
An-Fo Mfg. Co., 3129 Elmwood Ave., Oakland, Cal.
Associated Chemists, Inc., 1906 N. Halstead, Chicago
Boston Chemical Industries, 64 E. Brookline St., Boston
Chem. Mfg. & Dist. Co., Easton, Pa.
Chemical Service Co., Baltimore 30, Del.
Chemical Supply Co., Plymouth Bldg., Cleveland
Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
Clifton Chemical Co., 62 William St., N. Y.
Cole Labs., 22-19 37th Ave., L. I. City, N. Y.
Corn King Co., Cedar Rapids, Ia.
Eagle Soap Corp., Huntington, Ind.
Elkay Products Co., 323 W. 16th St., N. Y.
Exterminating Materials Co., 555 W. 22nd St., N. Y.
Fairfield Labs., Inc., 417 Cleveland Ave., Plainfield, N. J.

Fuld Bros., 702 S. Wolfe St., Baltimore
Geigy Co., 89 Barclay St., N. Y.
Goulard & Olena, Inc., 140 Liberty St., N. Y.
Higley Chemical Co., Dubuque, Iowa
Hockwald Chem. Co., 135 Mississippi St., San Francisco
R. M. Hollingshead Corp., Camden, N. J.
Hubman Supply Co., 225 N. 4th St., Columbus, O.
Hysan Prods. Co., 932 W. 38th Place, Chicago
Imperial Prods. Co., 1600 Fountain St., Phila.
J. F. Kerns Chem. Prods., 2239 S. Michigan Ave., Chicago
Koppers Co., White Tar Div., Kearny, N. J.
Lewis Soap & Chem. Co., Oakland, Calif.
Maywood Pest Exterminators, Maywood, Ill.
McCormick & Co., Inc., Baltimore, Md.
McLaughlin Gormley King Co., 1715-5th St., S. E., Minneapolis, Minn.
Michigan Chem. Corp., St. Louis, Mich.
Midland Labs., Dubuque, Ia.
Midway Chemical Co., 5235 W. 65th St., Chicago
Edgar A. Murray Co., 2703 Guoin St., Detroit
Mutual Chem. & Supply Co., 257 W. Gay St., Columbus, Ohio
National Sanitary Prods. Co., 217 N. 2nd St., St. Louis
John Opitz, Inc., 50-14 39th St., L. I. City
Penna. Salt Mfg. Co., Widener Bldg., Phila.
Pest Control Supply Co., 210 N. Western Ave., Los Angeles
Puritan Chemical Co., Atlanta
Ratin Labs., 116 Broad St., N. Y.
Theo. B. Robertson Prods. Co., 700 W. Division St., Chicago
Rochester Germicide Co., Rochester, N. Y.
St. Lawrence Chem. Co., Ogdensburg, N. Y.
Selig Co., 336 Marietta St., Atlanta, Ga.
S. S. Stafford, Inc., 603 Washington St., N. Y.
Stanco Distributors, Inc., 216 W. 14th St., N. Y.
Trio Chem. Wks., 341 Scholes St., B'klyn.
J. A. Tumbler Labs., 423 Hanover St., Baltimore
Ultra Chem. Wks., 2 Wood St., Paterson, N. J.
Uncle Sam Chemical Co., 573 W. 131st St., N. Y. C.
U. S. Sanitary Specialties Corp., 435 S. Western Ave., Chicago
Victory Chem. Co., 148 Fairmount Ave., Philadelphia
Whitmire Res. Labs., 339 S. Vandeventer, St. Louis
Wilkil Company, 1174 S. La Brea Ave., Los Angeles
G. H. Wood & Co., Toronto, Ont., Canada
York Chemical Co., 23 Dean St., B'klyn.

HYDROGENATED OILS

Armour & Co., 1355 W. 31st St., Chicago
E. F. Drew & Co., Wecoline Div., Boonton, N. J.
Eastern Industries, Inc., Ridgefield, N. J.
Emery Industries, 4300 Carew Tower, Cincinnati
W. C. Hardesty Co., Inc., 41 E. 42nd St., N. Y.
Hooker Electrochemical Co., Niagara Falls, N. Y.
Spencer Kellogg & Sons, Buffalo, N. Y.
Procter & Gamble Co., Cincinnati, O.
Werner G. Smith Co., 2191 W. 110th St., Cleveland
Welch, Holme & Clark, 439 West St., N. Y.
Wesson Oil & Snowdrift Co., 21 West St., N. Y.
Wyandotte Oil Co., Wyandotte, Mich.

HYDROGENATION PLANTS (see Oil Hydrogenation Plants)

HYDROSULFITES (Soap Bleaches)

American Cyanamid & Chem. Corp., 30 Rockefeller Plaza, N. Y.
Dow Chemical Co., Midland, Mich.
E. I. Du Pont de Nemours & Co., Wilmington, Del.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Monsanto Chem. Co., 1700 S. 2nd St., St. Louis
Richards Sales Corp., Warren & Morris St., Jer. City, N. J.
Rohm & Haas Co., Inc., 222 W. Washington Sq., Phila.
Royce Chem. Co., Carlton Hill, N. J.
Welch, Holme & Clark Co., 439 West St., N. Y.

HYDROCYCITRONELLAL (see Aromatic Chemicals)

HYDROXYCITRONELLAL (see Aromatic Chemicals)

HYPOCHLORITES (see Chlorine) (see Laundry Bleach)

INFUSORIAL EARTH (see Abrasives)

INSECT FLOWERS (see Pyrethrum)

INSECT POWDER GUNS (see Bellows)

INSECT REPELLENTS

J. T. Baker Chem. Co., Phillipsburg, N. J.
Carbide & Carbon Chems. Corp., 30 E. 42nd St., N. Y.
Fairfield Labs., Inc., 417 Cleveland Ave., Plainfield, N. J.
Fuld Bros., Inc., 702 S. Wolfe St., Baltimore
Kessler Chem. Co., 7272 State Rd., Phila.
Ketoid Chem. Co., 339 S. Van Deventer, St. Louis
Michigan Chem. Corp., St. Louis, Mich.
Puro Co., 2801 Locust St., St. Louis
Skol Co., 250 E. 43rd St., N. Y.
Stanco, Inc., 216 W. 23rd St., N. Y.
St. Lawrence Chem. Co., Ogdensburg, N. Y.
Ultra Chem. Wks., 2 Wood St., Paterson, N. J.
Whitmire Res. Labs., 339 Vandeventer, St. Louis
G. H. Wood & Co., Toronto, Ont., Canada
U. S. Industrial Chemicals, Inc., 60 E. 42nd St., N. Y.

INSECTICIDE BASE OILS (see Petroleum—
Insecticide Base Oils)

INSECTICIDE CONCENTRATES, Synthetic

Associated Chemists, Inc., 1906 N. Halsted Ave., Chicago
Atlas Powder Co., Wilmington, Del.
J. T. Baker Chem. Co., Phillipsburg, N. J.
Chipman Chem. Co., Bound Brook, N. J.
Dow Chemical Co., Midland, Mich.
E. I. Du Pont de Nemours & Co., Wilmington, Del.
Fairfield Labs., 417 Cleveland Ave., Plainfield, N. J.
Eston Chems., Inc., 3100 E. 26th St., Los Angeles
Geigy & Co., 89 Barclay St., N. Y.
Julius Hyman & Co., Denver, Colo.
Hercules Powder Co., Wilmington, Del.
Kolker Chem. Wks., 80 Lister Ave., Newark, N. J.
Penna. Salt Mfg. Co., Widener Bldg., Phila.
John Powell & Co., 1 Park Ave., N. Y.
R. J. Prentiss & Co., 110 William St., N. Y.
Rohm & Haas, Inc., 222 W. Washington Sq., Phila.
U. S. Industrial Chemicals, Inc., 60 E. 42nd St., N. Y.
Velsicol Corp., 330 E. Grand Ave., Chicago
Westvaco Chlorine Prods., 405 Lexington Ave., N. Y.
Whitmire Research Corp., 339 E. Vandeventer, St. Louis

INSECTICIDE SPRAY PERFUMES (see also
Perfuming Materials)

Allondon, Inc., 66 Dey St., N. Y.
van Ameringen-Haebler, Inc., 315 4th Ave., N. Y.
Aromatic Products, Inc., 15 E. 30th St., N. Y.
Bush Aromatics., 136 Liberty St., N. Y.
Centflor Co., 6 Varick St., N. Y.
Antoine Chiris Co., Inc., 119 W. 57th St., N. Y.
Compagnie Duval, Division of S. B. Penick & Co., 50
Church St., N. Y.
Compagnie Parento, Inc., Croton-on-Hudson, N. Y.
Dodge & Olcott, Inc., 180 Varick St., N. Y.
P. R. Dreyer Inc., 119 W. 19th St., N. Y.
E. I. Du Pont de Nemours, Wilmington, Del.
Felton Chemical Co., 603 Johnson Ave., Brooklyn
Benj. French, Inc., 160 Fifth Ave., N. Y. C.
Fritzsche Bros., Inc., 76 Ninth Ave., N. Y.
General Drug Co., 644 Pacific St., Brooklyn, N. Y.
Givaudan-Delawanna, Inc., 330 W. 42nd St., N. Y.
Gunning & Gunning, 601 W. 26th St., N. Y.
D. W. Hutchinson & Co., 162 Front St., N. Y.
Geo. Lueders & Co., 427 Washington St., N. Y. C.
Lautier Fils, Inc., 158 W. 18th St., N. Y. C.
Magnus, Mabée & Reynard, Inc., 16 Desbrosses St., N. Y.
Naugatuck Aromatics, 254 Fourth Ave., N. Y.
New York Aromatics Co., 5 Beekman St., N. Y.

organic chemicals

for improved

LIQUID SOAPS

Isopropanol, ethylene and diethylene glycol as well as triethanolamine and mixed isopropanolamine are important constituents for use in the formulation of good quality liquid soaps.

FLOOR WAXES

"Tergitol" Wetting Agent 4, and the fatty acid soaps of morpholine, monoethanolamine, and triethanolamine are valuable assistants in the preparation of emulsion type floor waxes.

SHAMPOOS & COSMETIC PREPARATIONS

"Carbowax" compounds, "Tergitol" Wetting Agents and the soaps of ethanolamines and isopropanolamines have many advantages in the preparation of cosmetic creams, lotions, and shampoos.

WAX POLISHES

Excellent shoe and furniture polishes can be prepared with soaps of monoethanolamine, triethanolamine and morpholine.

DRY CLEANING SOAPS

Butanol, Butyl "Cellosolve", Butyl "Carbitol", as well as "Tergitol" wetting agents, are excellent mutual solvents for use in dry cleaning soaps.

INSECT REPELLENTS

Ethythexanediol can be incorporated into creams or lotions to give long lasting protection against mosquitoes, biting flies, gnats, fleas, and chiggers.

AGRICULTURAL SPRAYS

Polyethylene glycol esters and soaps of monoethanolamine, triethanolamine and morpholine are efficient emulsifiers of toxicants in agricultural sprays.

Our 72-page booklet on "Emulsions" includes suggested formulas and methods of emulsifying oil, fats, waxes and greases. Write or call our nearest office for a copy.

"Tergitol," "Carbowax," "Cellosolve" and "Carbitol" are trade-marks of C&CCC



**CARBIDE AND CARBON
CHEMICALS CORPORATION**

Unit of Union Carbide and Carbon Corporation



30 East 42nd Street, New York 17, N. Y.

In Canada: Carbide and Carbon Chemicals, Ltd., Toronto 1

HEADQUARTERS

FOR PERFUME ODORS

FOR USE IN

INSECTICIDES
LIQUID SOAPS
PARA BLOCKS
CLEANSERS
POLISHES
SPRAYS

*"ODOR PROBLEMS
DISAPPEAR—
WHEN AROMATICS
SPECIALISTS ARE NEAR"*

AROMATIC PRODUCTS, INC.

15 East 30th Street, New York 16, N. Y.

Factory: Springdale, Conn.

ATLANTA

• DALLAS

• MEMPHIS

• PITTSBURGH

• CHICAGO

INSECTICIDE SPRAY PERFUMES (Contd.)

Norda Essential Oil & Chem. Co., 601 W. 26th St., N. Y.
Orbis Products Corp., 215 Pearl St., N. Y.
Perry Bros., Inc., 220 Flushing Ave., Brooklyn
Edw. Remus & Co., 11 W. 42nd St., N. Y.
Schimmel & Co., 601 W. 26th St., N. Y.
E. B. Snyder Labs., 2137 E. Harold St., Philadelphia
Sparhawk Co., Sparkill, N. Y.
Tombarel Prods. Corp., 12 E. 22nd St., N. Y.
Van Dyk & Co., Belleville, N. J.

INSECTICIDE SPREADERS (See Clays)

INSECTICIDE TESTING (see Laboratories)

INSECTICIDES (see Household Insecticides, Agricultural Insecticides)

INSTRUMENTS, Meters, Gauges, Thermometers, Etc.

Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland
Bausch & Lomb Optical Co., Rochester, N. Y.
S. F. Bowser & Co., Ft. Wayne, Ind.
Bristol Co., Waterbury, Conn.
Brown Instrument Co., Wayne & Windrim Sts., Phila.
Buffalo Meter Co., 2890 Main St., Buffalo, N. Y.
Cambridge Instrument Co., 3732 Grand Cent. Term., N. Y.
G. M. Davis Regulator Co., 2541 S. Washtenaw, Chicago
Eimer & Amend, 633 Greenwich St., N. Y.
Foxboro Co., Foxboro, Mass.
Liquidometer Corp., Long Island City, N. Y.
Pneumercator Co., Sperry Bldg., Brooklyn
Precision Thermometer Co., 1434 Brandywine St., Phila.
Read Machy. Co., York, Pa.
Republic Flow Meters Co., 2240 Diversey Blvd., Chicago
W. A. Taylor & Co., 7300 York Rd., Baltimore
Taylor Instrument Co., Rochester, N. Y.

IONONE (Violet Base) (see Aromatic Chemicals)

ISO-PROPYL ALCOHOL (see Alcohol, Iso-Propyl)

JACKETED KETTLES (see Kettles)

JAPAN WAX (see Waxes)

JARS, GLASS (see Bottles)

JASMIN, ARTIFICIAL (see Aromatic Chemicals)

KAOLIN (see Clays)

KEROSENE (see Petroleum Insecticide Base Oils)

KETTLES

Allied Steel & Equipt. Co., 1007 Springfield Ave., Irvington, N. J.
Alloy Prods. Corp., 221 Madison St., Waukesha, Wis.
Alsop Engineering Corp., 103 Green St., Milldale, Conn.
Aluminum Co. of America, Gulf Bldg., Pittsburgh
Bethlehem Foundry & Mach. Co., Grand Cent. Bldg., N.Y.
Consolidated Prods. Co., 15 Park Row, N. Y. (Used)
J. H. Day Co., 1144 Harrison Ave., Cincinnati
Edge Moor Iron Wks., 30 Rockefeller Plaza, N. Y.
Filter Paper Co., 2464 S. Michigan Ave., Chicago
First Machy. Corp., 157 Hudson St., N. Y. (Used)
Houchin Machinery Co., Hawthorne, N. J.
Huber Machine Co., 259-46th St., Brooklyn
Lancaster Iron Works, 564 S. Prince St., Lancaster, Pa.
Littleford Bros., 443 E. Pearl St., Cincinnati
Newman Tallow & Soap Machy. Co., 1051 W. 35th St. Chicago
Patterson Foundry & Machine Co., East Liverpool, O.
Patterson-Kelley Co., East Stroudsburg, Pa.
Pfaudler Co., 89 East Ave., Rochester, N. Y.
H. K. Porter Co., 49th & Harrison Sts., Pittsburgh
Geo. G. Rodgers Co., 225 W. 34th St., N. Y.
Sowers Mfg. Co., 1296 Niagara St., Buffalo, N. Y.
Stein Equipment Co., 90 West St., N. Y. (Used)
F. J. Stokes Mach. Co., Philadelphia, Pa.

Struthers-Wells Co., Warren, Pa.
Stuart & Peterson Co., Burlington, N. J.
H. B. Trout Co., 240 Ohio St., Buffalo, N. Y.

KIESELGUHR (Infusorial Earth) (see Abrasives and Fillers)

KITS (Wooden) (see Pails, Wooden)

LABELING MACHINES (Bottles and Cans)

Allied Steel & Equipt. Co., 1007 Springfield Ave., Irvington, N. J.
Alsop Engineering Corp., 103 Green St., Milldale, Conn.
Burt Machine Co., Baltimore, Md.
Consolidated Prods. Co., 15 Park Row, N. Y. (Used)
Economic Machinery Corp., Worcester, Mass.
Edward Ermold Co., 652-64 Hudson St., N. Y.
J. L. Ferguson Co., Joliet, Ill.
Filter Paper Co., 57 E. 24th St., Chicago
First Machy. Corp., 157 Hudson St., N. Y. (Used)
Hornsey & Co., 420 Lexington Ave., N. Y.
Mandel Products, 207 Astor St., Newark, N. J.
National Labeling Machine Co., 129 W. 19th St., Long Island City, N. Y.
Newman Tallow & Soap Mach. Co., 1051 W. 35th St., Chicago (Used)
New Jersey Machine Corp., Hoboken, N. J.
Pneumatic Scale Corp., North Quincy, Mass.
Potdevin Machine Co., 1220A 38th St., Bklyn.
F. B. Redington Co., 112 S. Sangamon St., Chicago
Scientific Filter Co., 12 Franklin Square, N. Y.
Stein Equipment Co., 90 West St., N. Y. (Used)

LABELING MACHINES (Boxes & Cases)

Allied Steel & Equipt. Co., 1007 Springfield Ave., Irvington, N. J.
Alsop Engineering Corp., 103 Green St., Milldale, Conn.
Consolidated Prods. Co., 15 Park Row, N. Y. (Used)
Newman Tallow & Soap Mach. Co., 1051 W. 35th St., Chicago (Used)
New Jersey Machine Corp., Hoboken, N. J.
Pneumatic Scale Corp., North Quincy, Mass.
Potdevin Machine Co., 1220 38th St., Bklyn.
Scientific Filter Co., 12 Franklin Square, N. Y.
Stein Equipment Co., 90 West St., N. Y. (Used)
Stokes & Smith Co., Summerdale, Phila., Pa.

LABELS

American Lithographic Co., 85 N. 3rd St., Brooklyn
Dennison Mfg. Co., Framingham, Mass.
Foxon Co., Providence, R. I.
Henderson Lithographing Co., Norwood, Cincinnati
R. J. Kittredge Co., 812 W. Superior St., Chicago
Label Craft Co., 508 W. Broadway, N. Y.
Strobridge Lithographing Co., Cincinnati
U. S. Printing & Litho. Co., Cincinnati, O.

LABORATORIES, TESTING

Applied Research Laboratories, Dayton, N. J.
Alfred J. Bendler Research Labs., 200 Hart Blvd., Staten Island, N. Y.
Columbus Labs., 33 N. State St., Chicago
Curtis & Tompkins, Ltd., 236 Front St., San Francisco
Dairy Laboratories, 2300 Locust St., Phila.
Harry W. Dietert Co., 9330 Roselawn Ave., Detroit
Elite Laboratories, 153 Center St., N. Y.
Entomological Testing Labs., 114 E. 32nd St., N. Y.
Hochstadter Laboratories, Inc., 128 Water St., N. Y.
Illinois Chemical Labs., Gridley, Ill.
James Laboratories, 189 W. Madison St., Chicago
La Wall & Harrison, 214 S. 12th St., Phila.
Lederer Bacteriological Labs., 269 S. 19th St., Phila.
Harold A. Levey Laboratories, Oleander & Dublin Sts., New Orleans
J. W. McCutcheon, 475 Fifth Ave., N. Y.
Molnar Laboratories, 211 E. 19th St., N. Y.
Pease Laboratories, 39 W. 38th St., N. Y.
Rosoff Laboratories, 60th & Osage, Phila.
Samuel P. Sadtler & Son, 210 S. 13th St., Phila.
Seil, Putt & Rusby, 16 E. 34th St., N. Y.
Skinner & Sherman, 246 Stuart St., Boston

Take it from the
Old Soap Sleuth...

There's an
Armour Soap that's right
for every job!



LAUNDRY, HOTEL, HOSPITAL or TEXTILE MILL... whatever your problems, Armour experts will be glad to help—whatever your specialized demands, Armour has a soap that's *right for you!*

CHEMICALLY BALANCED, scientifically controlled, Armour soaps are designed to give you complete satisfaction in performance and economy. Every soap is repeatedly tested in Armour's own pilot plants, for titer, suds and uniformity.

YOU CAN look to Armour for help—for quality, dependability and efficiency in all the soaps you need... *take it from the Old Soap Sleuth.*



Armour
INDUSTRIAL
Soap

Armour and Company, 1355 W. 31st., Chicago 9, Ill.

LABORATORIES, TESTING (Contd.)

Foster D. Snell, 29 W. 15th St., N. Y.
Stillwell & Gladding, 130 Cedar St., N. Y.
United States Testing Co., 1415 Park Ave., Hoboken, N. J.
Whitmire Res. Labs., 339 Vandeventer, St. Louis

LABORATORY ANIMALS

Albino Farms, Red Bank, N. J.
Breeding & Lab. Inst., 619 Kent Ave., Brooklyn

LABORATORY APPARATUS

Central Scientific Co., 1700 W. Irving Pk., Chicago
Harry W. Dietert Co., 9330 Roselawn Ave., Detroit (device for determining moisture content)
Eastern Engineering Co., 45 Fox St., New Haven, Conn.
Eimer & Amend, 633 Greenwich St., N. Y.
Fisher Scientific Co., Pittsburgh
Emil Greiner Co., 161—6th Ave., N. Y.
Laboratory Construction Co., 111 Holmes St., Kansas City, Mo.
Pfaltz & Bauer, 350—5th Ave., N. Y.
Scientific Materials Co., Pittsburgh
Arthur H. Thomas Co., Wash Sq., Phila.
Will Corp., Rochester, N. Y.

LABORATORY CHEMICALS

J. T. Baker Chemical Co., Phillipsburg, N. J.
General Chemical Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Harshaw Chemical Co., 1945 E. 97th St., Cleveland
Mallinckrodt Chemical Works, 3600 N. 2nd St., St. Louis
Merck & Co., Rahway, N. J.

LANOLIN

American Chemical Paint Co., Ambler, Pa.
American Lanolin Corp., Lawrence, Mass.
Bopf-Whittam Corp., Linden, N. J.
Botany Worsted Mills, Passaic, N. J.
Frank G. Fanning, 50 E. 42nd St., N. Y.
R. W. Greeff & Co., 10 Rockefeller Plaza, N. Y.
Griffin Chem. Co., 1000 16th St., San Francisco
Hummel Chemical Co., 90 West St., N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Lanaetex Prods. Sales Corp., Elizabeth, N. J.
N. I. Malmstrom & Co., 147 Lombardy St., Brooklyn
Merck & Co., Rahway, N. J.
Pfaltz & Bauer, Inc., 350 5th Ave., N. Y.
Robinson-Wagner Co., 110 E. 42nd St., N. Y.
Rosenthal Bercow Co., 25 E. 26th St., N. Y.
Welch, Holme & Clark, 439 West St., N. Y.

LAUNDRY BLEACH (Sodium Hypochlorite)

American Soap & Washoline Co., Cohoes, N. Y.
Chemical Mfg. & Dist. Co., Easton, Pa.
Chrisman Supply Co., Fayetteville, N. Y.
Cowles Detergent Co., 7016 Euclid Ave., Cleveland.
Delta Chemical Mfg. Co., 2101 Washington Blvd., Baltimore
Gaylord Chem. Co., 701 Woodswether Rd., Kansas City, Mo.
Higley Chemical Co., Dubuque, Iowa
Hysan Products Co., 932 W. 38th Place, Chicago
Imperial Prods. Co., 1600 Fountain St., Phila.
H. Kohnstamm & Co., 91 Park Pl., N. Y.
Legrand Bleach Corp., 111-49th St., Brooklyn
Lorenz Chem. Co., 135 No. 32nd Ave., Omaha
Mathieson Chemical Corp., 60 E. 42nd St., N. Y.
Monsanto Chemical Co., 1700 S. 2nd St., St. Louis, Mo.
Peck's Prods. Co., 620 E. Clarence Ave., St. Louis
Penna. Salt Mfg. Co., 1000 Widener Bldg., Phila.
Pittsburgh Plate Glass Co., Columbia Chemical Div., Grant Bldg., Pittsburgh
Sergeant Chem. Co., 7 Dey St., N. Y.
Surpass Chemical Co., Albany, N. Y.
Texas Soap Mfg. Corp., 4905 Calhoun Rd., Houston

Thompson-Hayward Chemical Co., Kansas City, Mo.
Jos. Turner & Co., Ridgefield, N. J.
Westvaco Chlorine Prods. Co., 405 Lexington Ave., N. Y.
Washine-National-Sands, Inc., 37-02 Northern Blvd., Long Island City

LAUNDRY BLUING

American Soap & Washoline Co., Cohoes, N. Y.
Brilco Labs., 947—61st St., Brooklyn
Cowles Detergent Co., 7016 Euclid Ave., Cleveland
Diamond Alkali Co., 535 Smithfield St., Pittsburgh
Fexandie & Sperrle, 205 Fulton St., N. Y.
Interstate Color Co., 5 Beekman St., N. Y.
H. Kohnstamm & Co., 91 Park Pl., N. Y.
National Aniline Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Penna. Salt Mfg. Co., 1000 Widener Bldg., Phila.
Pylam Products Co., 799 Greenwich St., N. Y.
Washine-National-Sands, Inc., 37-02 Northern Blvd., Long Island City
Welch, Holme & Clark Co., 439 West St., N. Y.

LAUNDRY SOAP, CAKE

Aid Soap Mfg. Co., 1962 Enoch St., Pittsburgh, Pa.
American Soap & Washoline Co., Cohoes, N. Y.
Armour Soap Wks., 1355 W. 31st St., Chicago
Beach Soap Co., Lawrence, Mass.
Colgate-Palmolive-Peet Co., Jersey City, N. J.
Cudahy Packing Co., 221 N. La Salle St., Chicago
Du Bois Soap Co., Cincinnati, O.
J. Eavenson & Sons, Del. & Penn. Sts., Camden, N. J.
Fels & Co., Philadelphia
Hewitt Soap Co., Dayton, O.
Kamen Soap Prods. Co., 233 Bway, N. Y.
Lightfoot Schultz Co., 1412 Park Ave., Hoboken, N. J.
Long Island Soap Co., Meeker Ave. & Bridgewater St., Brooklyn
Los Angeles Soap Co., Los Angeles, Calif.
Manhattan Soap Co., Bristol, Pa.
National Soap Co., 357 S. 25th St., Tacoma, Wash.
Newell Guttradt Co., 350 Fremont St., San Francisco, Cal.
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Procter & Gamble Co., Cincinnati
North Coast Chem. & Soap Wks., Seattle, Wash.
John T. Stanley Co., 642 W. 30th St., N. Y.
Swift & Co., Union Stock Yards, Chicago
Texas Soap Mfg. Co., 4905 Calhoun Rd., Houston
Vliet Soap Co., 638 Monroe St., Brooklyn, N. Y.
Warren Soap Mfg. Co., 51 Waverly St., Cambridge, Mass.
M. Werk Co., St. Bernard, Cincinnati
Allen B. Wisley Co., 6801 W. 65th St., Chicago, Ill.
Chas. W. Young & Co., 1247 N. 26th St., Phila.

LAUNDRY SOAP, CHIP

Aid Soap Mfg. Co., 1962 Enoch St., Pittsburgh, Pa.
American Soap & Washoline Co., Cohoes, N. Y.
Armour Soap Wks., 1355 W. 31st St., Chicago
Beach Soap Co., Lawrence, Mass.
Chem. Mfg. & Dist. Co., Easton, Pa.
Colgate-Palmolive-Peet Co., Jersey City, N. J.
Du Bois Soap Co., Cincinnati, O.
Eagle Soap Corp., Huntington, Ind.
J. Eavenson & Sons, Del. & Penn. Sts., Camden, N. J.
Harris Soap Co., Buffalo, N. Y.
Hewitt Soap Co., Dayton, Ohio
Lightfoot Schultz Co., 1412 Park Ave., Hoboken, N. J.
Long Island Soap Co., Meeker Ave. & Bridgewater St., Brooklyn
Los Angeles Soap Co., Los Angeles, Calif.
Mackenzie Laboratories, Front & Yarnall Sts., Chester, Pa.
Nat'l Milling & Chem. Co., Manayunk, Phila.
Nopec Chem. Co., Harrison, N. J.
National Soap Co., 357 South 25th St., Tacoma, Wash.
North Coast Soap & Chem. Wks., Seattle, Wash.
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Procter & Gamble Co., Cincinnati
Seaboard Distributors, 60 Park Pl., Newark, N. J.

LAUNDRY SOAP, CHIP (Contd.)

Sanitary Soap Co., 104 Railroad Ave., Paterson, N. J.
John T. Stanley Co., 642 W. 30th St., N. Y.
Swift & Co., Union Stock Yards, Chicago
Texas Soap Mfg. Corp., 4905 Calhoun Rd., Houston
Warren Soap Mfg. Co., 51 Waverly St., Cambridge, Mass.
M. Werk Co., St. Bernard, Cincinnati
Allen B. Wrisley Co., 6801 W. 65th St., Chicago, Ill.
Chas. W. Young & Co., 1247 N. 26th St., Phila.

LAUNDRY SOAP, POWD. AND GRAN.

Aid Soap Mfg. Co., 1962 Enoch St., Pittsburgh, Pa.
American Soap Powder Wks., 100 Van Dyke St., Brooklyn, N. Y.
American Soap & Washoline Co., Cohoes, N. Y.
Armour Soap Wks., 1355 W. 31st St., Chicago
Baums Castorine Co., 200 Mathew St., Rome, N. Y.
Beach Soap Co., Lawrence, Mass.
Chemical Mfg. & Dist. Co., Easton, Pa.
Colgate-Palmolive-Peet Co., Jersey City, N. J.
Cudahy Packing Co., 221 N. La Salle St., Chicago
Du Bois Soap Co., Cincinnati, O.
Eagle Soap Corp., Huntington, Ind.
J. Eavenson & Sons, Del. & Penn. Sts., Camden, N. J.
Gaylord Chem. Co., 701 Woodswether Rd., Kansas City, Mo.
Hewitt Soap Co., Dayton, Ohio
H. Kohnstamm & Co., 91 Park Pl., N. Y.
Los Angeles Soap Co., Los Angeles, Calif.
Mackenzie Laboratories, Front & Yarnell Sts., Chester, Pa.
Miranol Chemical Co., P. O. Box 118, Milltown, N. J.
Naphole, Inc., 15 E. 26th St., N. Y.
Nat'l Milling & Chem. Co., Manayunk, Phila.
Nopco Chem. Co., Harrison, N. J.
National Soap Co., 357 South 25th St., Tacoma, Wash.
North Coast Soap & Chem. Wks., Seattle, Wash.
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Port Huron Detergent Co., Port Huron, Mich.
Procter & Gamble Co., Cincinnati
R. G. A. Laboratories, 145 W. 45th St., N. Y.
Sanitary Soap Co., 104 Railroad Ave., Paterson, N. J.
Seaboard Distributors, 60 Park Pl., Newark, N. J.
Skotch Prods. Corp., 2710 Detroit Ave., Cleveland
John T. Stanley Co., 642 W. 30th St., N. Y.
Stevens Soap Corp., 202 Sullivan St., Brooklyn
Swift & Co., Union Stock Yards, Chicago
Texas Soap Mfg. Corp., 4905 Calhoun Rd., Houston
Warren Soap Mfg. Co., 51 Waverly St., Cambridge, Mass.
M. Werk Co., St. Bernard, Cincinnati
Allen B. Wrisley Co., 6801 W. 65th St., Chicago, Ill.
Chas. W. Young & Co., 1247 N. 26th St., Phila.

LAUNDRY SODA, (see Soda)

LAUNDRY SOURS (Fluoride, etc.)

Aluminum Co. of America, Gulf Bldg., Pittsburgh
American Cyanamid & Chem. Corp., 30 Rockefeller Plaza, N. Y.
American Fluoride Corp., 151 W. 19th St., N. Y.
Blockson Chemical Co., Joliet, Ill.
Chemical Mfg. & Dist. Co., Easton, Pa.
Croton Chem. Corp., 114 Liberty St., N. Y.
Diamond Alkali Co., 535 Smithfield Ave., Pittsburgh, Pa.
General Chem. Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Harshaw Chemical Co., 1945 E. 97th St., Cleveland
Hummel Chem. Co., 90 West St., N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
H. Kohnstamm & Co., 91 Park Pl., N. Y.
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Penna. Salt Mfg. Co., 1000 Widener Bldg., Phila.
Port Huron Detergent Co., Port Huron, Mich.
Rosenthal Berrow Co., 25 E. 26th St., N. Y.
Standard Chem. Co., Columbus, O.
John T. Stanley Co., 642 W. 30th St., N. Y. C.
Henry Sundheimer, Inc., 103 Park Ave., N. Y.
Texas Soap Mfg. Corp., 4905 Calhoun Rd., Houston

Thompson-Hayward Chemical Co., Kansas City, Mo.
Victor Chemical Wks., 141 W. Jackson Blvd., Chicago
Welch Holme & Clark, Inc., 439 West St., N. Y.
Wyandotte Chem. Corp., Wyandotte, Mich.
Chas. W. Young & Co., 1247 N. 26th St., Phila.

LAVENDER OIL (see Essential Oils)

LAURIC ACID (see also Fatty Acids)

Armour Chem. Div., Armour & Co., 1355 W. 31st St., Chicago
E. F. Drew & Co., Boonton, N. J.
El Dorado Oil Wks., 311 California St., San Francisco
Woburn Chemical Corp., Harrison, N. J.

LAURYL ALCOHOL

E. I. Du Pont de Nemours & Co., Inc., Wilmington, Del.
Givaudan-Delawanna, Inc., 330 W. 42nd St., N. Y. C.
M. Michel & Co., 95 Broad St., N. Y.
Robinson Wagner Co., 110 E. 42nd St., N. Y.

LEAD ARSENATE

Amer. Agricultural Chem. Co., 50 Church St., N. Y.
American Cyanamid & Chem. Co., 30 Rockefeller Plaza, N. Y.
California Spray-Chemical Corp., Lucas & Ortho Way, Richmond, Calif.
Chipman Chem. Co., Bound Brook, N. J.
Dow Chemical Co., Midland, Mich.
E. I. Du Pont de Nemours & Co., Inc., Wilmington, Del.
General Chemical Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Rosenthal Berrow Co., 25 E. 26th St., N. Y.
Sherwin-Williams Co., Cleveland, O.

LECITHIN

American Lecithin Corp., Corona Ave., Elmhurst, L. I.
Chemical Novelty Corp., 946 W. 5th St., Cincinnati
W. A. Cleary Corp., New Brunswick, N. J.
Digestive Ferments Co., 930 Henry St., Detroit
Enco Co., 441 Lexington Ave., N. Y.
R. W. Greeff & Co., 10 Rockefeller Plaza, N. Y.
Merck & Co., Rahway, N. J.
Ross & Rowe, Inc., 50 Broadway, N. Y.
Robinson Wagner Co., 110 E. 42nd St., N. Y.
Soya Corp. of America, 30 Rockefeller Plaza, N. Y.
A. E. Starkie, 5461 W. Division St., Chicago
Welch Holme & Clark, Inc., 439 West St., N. Y.
Wilson Labs., 4221 S. Western Blvd., Chicago

LEMON OIL, LEMONGRASS OIL (see Essential Oils)

LIME (Live and Hydrated)

Aluminum Co. of America, Gulf Bldg., Pittsburgh
California Spray-Chemical Corp., Lucas & Ortho Way, Richmond, Calif.
Dow Chemical Co., Midland, Mich.
E. I. Du Pont de Nemours, Wilmington, Del.
Hoosac Valley Lime Co., Adams, Mass.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Lehigh Lime Co., 111 W. Washington St., Chicago
National Gypsum Co., 192 Delaware Ave., Buffalo, N. Y.
Rockland-Rockport Lime Co., Rockland, Maine
William H. Scheel, Inc., 38 Franklin St., Brooklyn
U. S. Lime Prods. Corp., 85 Second St., San Francisco
Whiterock Quarries, Inc., Bellefonte, Pa.
Whittaker, Clark & Daniels, Inc., 260 Bway., N. Y.
Witco Chemical Co., 295 Madison Ave., N. Y.

LIME SULFUR

Allen Co., Pittstown, N. J.
California Spray-Chemical Corp., Lucas & Ortho Way, Richmond, Calif.
Chipman Chemical Co., Bound Brook, N. J.
Corn King Co., Cedar Rapids, Ia.

LIME SULFUR (Contd.)

Dow Chemical Co., Midland, Mich.
E. I. Du Pont de Nemours & Co., Inc., Wilmington, Del.
General Chemical Div., Allied Chem. & Dye Corp., 40
Rector St., N. Y.
Sherwin-Williams Co., Cleveland, O.
Taylor Chem. Wks., Aberdeen, N. C.

LINALOE OIL (see Essential Oils)

LINALOOL (see Aromatic Chemicals)

LINALYL ACETATE (see Aromatic Chemicals)

LINERS (see Bag Liners)

LINING MACHINERY (Cartons)

Pneumatic Scale Corp., North Quincy, Mass.
F. B. Redington Co., 112 S. Sangamon St., Chicago

LINSEED OIL

(see also Brokers and Dealers)

Archer-Daniels-Midland Corp., Minneapolis, Minn.
Bisbee Linseed Co., Philadelphia
William O. Goodrich Co., Milwaukee, Wis.
Spencer Kellogg & Sons, Buffalo, N. Y.
Kelloggs & Miller, Amsterdam, N. Y.
Minnesota Linseed Oil Co., Minneapolis, Minn.
Pacific Vegetable Oil Corp., 62 Townsend St.,
San Francisco
J. H. Redding, Inc., 17 Battery Place, N. Y.
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
A. E. Starkie Co., 5461 W. Division St., Chicago
Welch Holme & Clark Co., 439 West St., N. Y.

LINSEED OIL SOAP (see Potash Soaps)

LIQUID SOAP AND BASE (see Potash Soap)

MACHINERY, USED (see Used Machinery)

MAGNESIUM OXIDE (Magnesia)

American Cyanamid & Chemical Corp., 30 Rockefeller
Plaza, N. Y.
J. T. Baker Chem. Co., Phillipsburg, N. J.
Dow Chemical Co., Midland, Mich.
E. I. Du Pont de Nemours & Co., Wilmington, Del.
Harshaw Chemical Co., 1945 E. 97th St., Cleveland
Merck & Co., Rahway, N. J.
Michigan Chem. Corp., St. Louis, Mich.
E. E. Schundler & Co., Joliet, Ill.
Chas. A. Wagner Co., 813 Callowhill St., Phila.
Welch, Holme & Clark Co., 439 West St., N. Y.
Westvaco Chlorine Prods., 405 Lexington Ave., N. Y.
Whittaker, Clark & Daniels, Inc., 260 Bway., N. Y.
Witco Chemical Co., 295 Madison Ave., N. Y.

MAGNESIUM STEARATE (see Stearates)

MAHOGANY SULFONATES (see Naphthenic Acids)

MAHOGANY SOAP (This term also used to designate
Petroleum Sulfonates. See also Naphthenic Acids,
Naphthalene Sulfonates.)

Armour Soap Wks., 1355 W. 31st St., Chicago
Colgate-Palmolive-Peet Co., Jersey City, N. J.
Emery Industries, 4300 Carew Tower, Cincinnati
W. C. Hardesty Co., 41 E. 42nd St., N. Y.
Los Angeles Soap Co., Los Angeles, Calif.
Oil States Pet. Co., 233 Broadway, N. Y.
Oronite Chemical Co., 200 Bush St., San Francisco
John T. Stanley Co., 642 W. 30th St., N. Y.

MANILA GUMS

T. G. Cooper & Co., Cedar & Venango Sts., Phila.
Gillespie-Rogers-Pyatt Co., 80 John St., N. Y.
O. G. Innes Corp., 82 Wall St., N. Y.
Wm. H. Scheel, Inc., 38 Franklin Street, Brooklyn
U. S. Industrial Chemicals, Inc., Lincoln Bldg., N. Y.

MARINE SOAPS (see Salt Water Soaps)

MECHANIC'S HAND PASTE (see Hand Soap)

MEDICINAL SOAPS, CAKE

Armour Soap Wks., 1355 W. 31st St., Chicago
J. Eavenson & Sons, Del. & Penn Sts., Camden, N. J.
Hewitt Soap Co., Dayton, O.
Los Angeles Soap Co., Los Angeles, Calif.
Newell Guttradt Co., 350 Fremont St., San Francisco, Cal.
Procter & Gamble Co., Cincinnati
Rare Chemicals, Inc., First & Essex Sts., Harrison, N. J.
Schmidt Soap Products Co., 236 W. North Ave., Chicago
John T. Stanley Co., 642 W. 30th St., N. Y.
Allen B. Wrisley Co., 6801 W. 65th St., Chicago

MEDICINAL SOAPS, LIQUID (see Potash Soaps)

MENTHOL

(see also Essential Oils)

Bendix Chem. Corp., 120 Lexington Ave., N. Y.
S. W. Bridges & Co., 82 Wall St., N. Y.
Consumers Import Co., 350 Fifth Ave., N. Y.
Dodge & Olcott, Inc., 180 Varick St., N. Y.
P. R. Dreyer, 119 W. 19th St., N. Y.
Enco Chem. Corp., 441 Lexington Ave., N. Y.
Fritzsche Bros., Inc., 76 Ninth Ave., N. Y.
Givaudan-Delawanna, Inc., 330 W. 42nd St., N. Y.
Magnus, Mabce & Reynard, Inc., 16 Desbrosses St., N. Y.
A. Maschmeijer, Jr., Inc., 45 W. 16th St., N. Y.
McKesson & Robbins, Inc., 155 E. 42nd St., N. Y.
Norda Essential Oil & Chem. Co., 601 W. 26th St., N. Y.
Orbis Products Corp., 215 Pearl St., N. Y.
S. B. Penick & Co., 50 Church St., N. Y.
R. J. Prentiss & Co., 110 William St., N. Y.
Rosenthal Bercow Co., 25 E. 26th St., N. Y.
Schimmel & Co., 601 W. 26th St., N. Y.
Sherka Chemical Co., 86 Orange St., Bloomfield, N. J.
Tombarel Prods., 12 E. 22nd St., N. Y.

MERCURY BICHLORIDE (Corrosive Sublimato)

J. T. Baker Chem. Co., Phillipsburg, N. J.
F. W. Berk & Co., Wood Ridge, N. J.
General Chemical Div., Allied Chem. & Dye Corp., 40
Rector St., N. Y.
Heyden Chemical Corp., 393 7th Ave., N. Y.
Mallinckrodt Chemical Works, St. Louis
Merck & Co., Rahway, N. J.
Metalsalts Corp., 27 First Ave., Paterson, N. J.
New York Quinine & Chem. Wks., N. 11th & Berry Sts.,
Brooklyn
Chas. Pfizer & Co., 81 Maiden Lane, N. Y.

METAL PAILS, etc. (Waste Baskets, Receptacles, Spit- toons, etc., Garbage Pails & Barrels)

Justrite Mfg. Co., 2061 N. Southport Ave., Chicago
National Enameling & Stamping Co., Milwaukee, Wis.
F. H. Lawson Co., Cincinnati
Solar Receptacle Co., Melrose Park, Ill.
Wheeling Corrugating Co., Wheeling, W. Va.
Witt Cornice Co., 2118 Winchell Ave., Cincinnati

METAL POLISH (see Polish)

METALLIC SOAPS (see Stearates)

METERS (see Instruments)

METHANOL (Synthetic)

Carbide & Carbon Chem. Corp., 30 E. 42nd St., N. Y.
Commercial Solvents Corp., 17 E. 42nd St., N. Y.
E. I. Du Pont de Nemours & Co., Wilmington, Del.
Merck & Co., Rahway, N. J.
Solvay Sales Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.

METHYL ANTHRANILATE

(see also *Aromatic Chemicals*)

Aromatic Products, Inc., 15 E. 30th St., N. Y.
Dow Chemical Co., Midland, Mich.
E. I. Du Pont de Nemours, Wilmington, Del.
Givaudan-Delawanna, Inc., 330 W. 42nd St., N. Y.
Florasynth Labs., Olmstead & Starling Aves., N. Y.
A. Maschmeijer, Jr., Inc., 45 W. 16th St., N. Y.

METHYL BROMIDE

Dow Chemical Co., Midland, Mich.
Eaton Chemicals, Inc., 3100 E. 26th St., Los Angeles
Michigan Chem. Co., St. Louis, Mich.
Westvaco Chlorine Prods. Corp., 405 Lexington Av., N. Y.

METHYL CELLULOSE

Dow Chemical Co., Midland, Mich.
General Dyestuff Corp., 435 Hudson St., N. Y.
Hercules Powder Co., Wilmington, Del.

METHYL SALICYLATE (Artificial Wintergreen)

(see also *Aromatic Chemicals*)

J. T. Baker Chem. Co., Phillipsburg, N. J.
Dow Chemical Co., Midland, Mich.
Givaudan-Delawanna, Inc., 330 W. 42nd St., N. Y.
Heyden Chemical Corp., 393 7th Ave., N. Y.
Merck & Co., Rahway, N. J.
Monsanto Chemical Co., 1700 S. 2nd St., St. Louis

MILLS, SOAP POWDER (see Soap Machinery & Grinding Machinery)

MINERAL OIL, WHITE (see White Mineral Oil)

MINERAL SOAP (see Petrolatum)

MIRBANE OIL (Nitrobenzine)

(see also *Essential Oils*)

Calco Chemical Co., Bound Brook, N. J.
E. I. Du Pont de Nemours & Co., Inc., Wilmington, Del.
Monsanto Chemical Co., 1700 S. 2nd St., St. Louis
National Aniline Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Naugatuck Aromatics, Inc., 254 Fourth Ave., N. Y.

MIXERS (Portable)

Alsop Engineering Corp., 103 Green St., Milldale, Conn.
Allied Steel & Equipment Co., 1007 Springfield Ave., Irvington, N. J.
Consolidated Products Co., 15 Park Row, N. Y. (Used)
Eastern Engineering Co., 45 Fox St., New Haven, Conn.
Ertel Eng. Co., Kingston, N. Y.
Filter Paper Co., 2464 S. Michigan Ave., Chicago
First Machy. Corp., 157 Hudson St., N. Y. (Used)
Houchin Machinery Co., Hawthorne, N. J.
Frank B. Lomax Co., 365 W. Oak St., Chicago
Mixing Equipment Co., Inc., 1067 Garson Ave., Rochester, N. Y.
Newman Tallow & Soap Mach. Co., 1051 W. 35th St., Chicago (Used)
Patterson Fdy. & Mch. Co., E. Liverpool, O.
Pfaudler Co., 89 East Ave., Rochester, N. Y.
H. K. Porter Co., 49th & Harrison Sts., Pittsburgh
Read Machy. Co., York, Pa.
Geo. G. Rodgers Co., 225 W. 34th St., N. Y.
Stein Equipment Co., 90 West St., N. Y. (Used)

MIXING MACHINERY (Change Can Mixers)

Abbe Engineering Co., 50 Church St., N. Y.
Allied Steel & Equipment Co., 1007 Springfield Ave., Irvington, N. J.
Amer. Mach. & Foundry Co., 511 5th Ave., N. Y.
Arthur Colton Co., Detroit, Mich.
Consolidated Products Co., 15 Park Row, N. Y. (Used)
J. H. Day Co., 1144 Harrison Ave., Cincinnati
First Machy. Corp., 157 Hudson St., N. Y. (Used)
Houchin Machy. Co., Hawthorne, N. J.
Kent Machine Works, 39 Gold St., Brooklyn
Mixing Equipment Co., Inc., 1067 Garson Ave., Rochester, N. Y.
Newman Tallow & Soap Mach. Co., 1051 W. 35th St., Chicago (Used)
H. K. Porter Co., 49th & Harrison Sts., Pittsburgh
Read Machy. Co., York, Pa.
Chas. Ross & Son Co., 150 Classon Ave., Brooklyn
Stein Equipment Co., 90 West St., N. Y. (Used)
Waterville Fndry. & Machine Co., Waterville, N. Y.

MIXING MACHINERY (Dry Products)

Abbe Engineering Co., 50 Church St., N. Y.
Allied Steel & Equipment Co., 1007 Springfield Ave., Irvington, N. J.
Amer. Mach. & Foundry Co., 511 5th Ave., N. Y.
Atlas Steel Construction Co., Irvington, N. Y.
Consolidated Products Co., 15 Park Row, N. Y. (Used)
J. H. Day Co., 1144 Harrison Ave., Cincinnati
First Machy. Corp., 157 Hudson St., N. Y. (Used)
B. F. Gump Co., 412 S. Clinton St., Chicago
Houchin Machinery Co., Hawthorne, N. J.
Huber Machine Co., 259—46th St., Brooklyn
Lancaster Iron Works, Lancaster, Pa.
Newman Tallow & Soap Mach. Co., 1051 W. 35th St., Chicago (Used)
H. K. Porter Co., 49th & Harrison Sts., Pittsburgh
Prater Pulverizer Co., 1829 S. 55th Ave., Chicago
Read Machy. Co., York, Pa.
Robinson Mfg. Co., Muncy, Pa.
Geo. G. Rodgers Co., 225 W. 34th St., N. Y.
Chas. Ross & Son Co., 150 Classon Ave., Brooklyn
Scottdel, Inc., Swanton, Ohio
Sprout Waldron & Co., Muncy, Pa.
Stein Equipment Co., 90 West St., N. Y. (Used)
Stephens-Adamson Mfg. Co., Aurora, Ill.
F. J. Stokes Machine Co., Philadelphia, Pa.
Struthers-Wells Corp., Warren, Pa.
Aurelio Tanzi Engineering Co., 430 Jefferson St., Bklyn.

MIXING MACHINERY (General)

Alsop Engineering Corp., 103 Green St., Milldale, Conn.
Allied Steel & Equipment Co., 1007 Springfield Ave., Irvington, N. J.
Amer. Mach. & Foundry Co., 511 5th Ave., N. Y.
Baker-Perkins Co., 250 Park Ave., N. Y.
Beach-Russ Co., 60 Church St., N. Y.
Arthur Colton Co., Detroit
Consolidated Prods. Co., 15 Park Row, N. Y. (Used)
J. H. Day Co., 1144 Harrison Ave., Cincinnati
Eastern Engineering Co., 45 Fox St., New Haven
Edge Moor Iron Wks., Edge Moor, Del.
Filter Paper Co., 2464 S. Michigan Ave., Chicago
First Machy. Corp., 157 Hudson St., N. Y. (Used)
B. F. Gump Co., 431 S. Clinton St., Chicago
Houchin Machinery Co., Hawthorne, N. J.
Huber Machine Co., 259—46th St., Brooklyn
Kent Machine Co., 37 Gold St., Brooklyn
Lancaster Iron Works, Lancaster, Pa.
J. M. Lehmann Co., Lyndhurst, N. J.
Littleford Bros., 443 E. Pearl St., Cincinnati
Mixing Equipment Co., 1067 Garson Ave., Rochester, N. Y.
Newman Tallow & Soap Mach. Co., 1051 W. 35th St., Chicago (Used)
Pfaudler Co., 89 East St., Rochester, N. Y.
H. K. Porter Co., 49th & Harrison Sts., Pittsburgh
Prater Pulverizer Co., 1829 S. 55th Ave., Chicago
Read Machinery Co., York, Pa.
Robinson Mfg. Co., Muncy, Pa.
Chas. Ross & Son Co., 150 Classon Ave., Brooklyn
Scottdel, Inc., Swanton, Ohio
Sowers Mfg. Co., 1296 Niagara St., Buffalo, N. Y.
Sprout Waldron & Co., Muncy, Pa.
Stein Equipment Co., 90 West St., N. Y. (Used)
Stephens-Adamson Mfg. Co., Aurora, Ill.

MIXING MACHINERY (General) (Contd.)

F. J. Stokes Mach. Co., Philadelphia, Pa.
Struthers-Wells Co., Warren, Pa.
Tubo Mixer Corp., 247 Park Ave., N. Y.
Waterville Foundry & Machine Co., Waterville, N. Y.

MONTAN WAX (see Waxes)

MOP HANDLES

Amer. Standard Mfg. Co., 2509 S. Green St., Chicago
Stanley H. Coffin, 12 Pearl St., Boston
Eagle Woodenware Mfg. Co., Hamilton, O.
Economy Mop Wringer Co., 1944 W. 21st St., Chicago
Erie Mop & Wringer Co., East Rochester, N. Y.
Howard Dustless Duster Co., Boston
W. E. Kautenberg Co., Freeport, Ill.
Marvel Mop Division, Zelinkoff Co., Wichita, Kans.
Massasoit Mfg. Co., 72 Park Pl., N. Y.
Rex-Cleanwall Corp., Brazil, Ind.
Rubon Wood Finishing & Prods. Co., 500 W. 7th St.,
Kansas City, Mo.
Silver-Chamberlain Co., Clayton, N. Y.
White Mop Wringer Co., Fultonville, N. Y.

MOP WRINGERS AND PAILS

Howard J. Barrett, 1908 Walnut St., Phila.
Stanley H. Coffin, 12 Pearl St., Boston
Colson Mfg. Co., Elyria, O.
Dobbins Mfg. Co., Elkhart, Ind.
Eagle Woodenware Mfg. Co., Hamilton, Ohio
Economy Mop Wringer Co., 1944 W. 21st St., Chicago
Geuder, Paesche & Frey, Milwaukee, Wis.
Illinois Duster Co., 1944 Webster Ave., Chicago
S. C. Lawlor Co., 122 N. Aberdeen St., Chicago
Muskegon Sanitary Supply Co., Muskegon Heights, Mich.
Palmer Fixture Co., Waukesha, Wisc.
Sweet Mop Co., 1913 Fremont Ave., South Pasadena, Cal.
White Mop Wringer Co., Fultonville, N. Y.

MOPPING TANKS AND TRUCKS

Howard J. Barrett, 1908 Walnut St., Phila.
Eagle Woodenware Mfg. Co., Hamilton, O.
Economy Mop Wringer Co., 1944 W. 21st St., Chicago
S. C. Lawlor Co., 122 N. Aberdeen St., Chicago
Palmer Fixture Co., Waukesha, Wisc.
White Mop Wringer Co., Fultonville, N. Y.

MOPS

Alabama Broom & Mattress Co., Huntsville, Ala.
Amer. Standard Mfg. Co., 2509 S. Green St., Chicago
Amer. Textile Prods. Co., 5606 Euclid Ave., Cleveland
Burdett-Rose Mfg. Co., 6100 Independence Rd., Kansas
City, Mo.
California Cotton Mills Co., Oakland, Calif.
Chattanooga Broom & Mop Co., Chattanooga, Tenn.
Clark Bros. Mfg. Co., 34 N. Front St., Phila.
Stanley H. Coffin, 12 Pearl St., Boston, Mass.
Eagle Woodenware Mfg. Co., Hamilton, O.
Golden Star Polish Mfg. Co., 2901 E. 13th St., Kansas
City, Mo.
Howard Dustless Duster Co., Boston, Mass.
Illinois Duster & Brush Co., 1944 Webster Ave., Chicago
W. E. Kautenberg Co., P. O. Box 255, Freeport, Ill.
Klenzall Mfg. Co., Atlanta, Ga.
Marvel Mop Division, Zelinkoff Co., Wichita, Kans.
Palmer Fixture Co., Waukesha, Wisc.
Pioneer Mfg. Co., Cleveland, Ohio
Rex-Cleanwall Corp., Brazil, Ind.
Rubon Woodfinishing & Prod. Co., 500 W. 7th St.,
Kansas City, Mo.
Silver-Chamberlain Co., Clayton, N. J.
T. C. Smyth Mfg. Co., Union City, Ind.
Sweet Mop Co., 1913 Fremont Ave., South Pasadena, Cal.
Tate Mfg. Co., Boston, Mass.
M. J. Toohy & Co., Fall River, Mass.
Tuscaloosa Mills, Tuscaloosa, Ala.
Tu-Way Products Co., 1423 Franklin St., Detroit
Yocma Mills, Water Valley, Miss.

MOSQUITO LARVICIDES

Ampion Corp., 4-88—47th Ave., L. I. City, N. Y.
Associated Chemists, Inc., 1906 N. Halsted St., Chicago
Baird & McGuire, Inc., Holbrook, Mass.
Cary Mfg. Co., 4917 E. Michigan St., Indianapolis
Cenol Co., 4250 N. Pulaski Ave., Chicago
Chem. Service Co. of Balto., Howard & West Sts., Balto.
Chemical Supply Co., Plymouth Bldg., Cleveland.
Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
Chipman Chemical Co., Bound Brook, N. J.
Churchill Mfg. Co., Galesburg, Ill.
Clifton Chemical Co., 62 William St., N. Y.
Crystal Soap & Chem. Co., 6300 State Rd., Philadelphia
Davies-Young Soap Co., Dayton, O.
Eagle Soap Corp., Huntington, Ind.
Fuld Bros., 702 S. Wolfe St., Baltimore
Geigy Co., 89 Barclay St., N. Y.
Hockwald Chem. Co., 135 Mississippi St., San Francisco
R. M. Hollingshead Corp., Camden, N. J.
James Huggins & Son, 239 Medford St., Malden, Mass.
Hunt Mfg. Co., Lisbon Rd., Cleveland
Hysan Prods. Co., 932 W. 38th Place, Chicago
Ketoid Chem. Co., 339 S. Van Deventer, St. Louis
Koppers Co., White Tar Div., Kearny, N. J.
McCormick & Co., Inc., Baltimore, Md.
Merck & Co., Rahway, N. J.
Michigan Chem. Corp., St. Louis, Mich.
R. J. Prentiss & Co., 110 William St., N. Y.
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Rohm & Haas Co., 222 W. Washington Sq., Phila.
Shell Oil Co., 50 W. 50th St., N. Y.
Texol Chemical Works, 3 Winter St., Worcester, Mass.
Uncle Sam Chemical Co., 573 W. 131st St., St. N. Y. C.
Thompson-Hayward Chemical Co., Kansas City, Mo.
U. S. Sanitary Specialties Corp., 435 S. Western Ave.,
Chicago
James Varley & Sons, 2100 Switzer Ave., St. Louis
Velsicol Corp., 120 E. Pearson St., Chicago
York Chem. Co., 23 Dean St., Bklyn.

MOTH BAGS

Clopay Co., Cincinnati
Kennedy Car Liner Co., Indianapolis
LeMontre Co., Cincinnati
Rosette Co., 200 Tillary St., Brooklyn

MOTH PROOFING COMPOUNDS

American Cyanamid & Chemicals Corp.,
30 Rockefeller Plaza, N. Y.
Ampion Corp., 4-88—47th Ave., L. I. City, N. Y.
Antara Prods. Div., Gen. Aniline & Film Corp., 444
Madison Ave., N. Y.
Associated Chemists, Inc., 1906 N. Halsted Ave., Chicago
Barrett Div., Allied Chem. & Dye Corp., 40 Rector
St., N. Y.
Baird & McGuire, Inc., Holbrook, Mass.
Banco Labs., 947—61st St., Brooklyn
Cenol Co., 4250 N. Crawford Ave., Chicago
Chem. Mfg. & Dist. Co., Easton, Pa.
Chemical Supply Co., Plymouth Bldg., Cleveland
Dow Chemical Co., Midland, Mich.
Eagle Soap Corp., Huntington, Ind.
E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.
Edelman Co., 6429 S. St. Lawrence Ave., Chicago
Elkay Prods. Co., 323 W. 16th St., N. Y.
Fairfield Labs., Inc., 417 Cleveland Ave., Plainfield, N. J.
Fine Organics, Inc., 211 E. 19th St., N. Y.
Fuld Bros., 702 S. Wolfe St., Baltimore
Geigy Co., 89 Barclay St., N. Y.
General Dyestuffs Corp., 435 Hudson St., N. Y.
James Good Co., Susquehanna Ave. & Martha St., Phila.
R. W. Greeff & Co., 10 Rockefeller Plaza, N. Y.
Harrison Oil Co., 5110 N. 35th St., Milwaukee
Hercules Powder Co., Wilmington, Del.
Higley Chemical Co., Dubuque, Iowa
Hockwald Chem. Co., 135 Mississippi St., San Francisco
Arnold Hoffman Co., Providence, R. I.
R. M. Hollingshead Corp., Camden, N. J.
Hooker Electrochemical Co., Niagara Falls, N. Y.
Hysan Prods. Co., 932 W. 38th Place, Chicago
Imperial Prods. Co., 1600 Fountain St., Phila.
J. F. Kerns Chem. Prods., 2239 S. Michigan Ave.,
Chicago

WURSTER & SANGER, INC.

Contracting and Consulting Chemical Engineers

52nd STREET & S. KENWOOD AVENUE, CHICAGO 15, ILLINOIS

Specialists in the Soap, Glycerine, Fat and Oil Industries

Complete Plants and Engineering Services for:

Crude, Dynamite and C. P. Glycerine
Refining, Bleaching and Deodorizing Oils
Hydrogenation of Oils
Hydrogen
Vanaspasi
Vegetable Shortening, Margarine
Salad Oil, Winter Oil
Evaporation in Single, Double and Multiple Effects
Fat Splitting: Twitchell and Autoclave Processes
Stearic Acid and Red Oil
Fatty Acid Distillation
Laundry and Toilet Soaps
Spray-Process Soap Plants
Oil Extraction and Degreasing
Glue and Gelatine
Continuous Glue Evaporation

Development of Processes, Reports, Investigations

W & S GLYCERINE EVAPORATORS

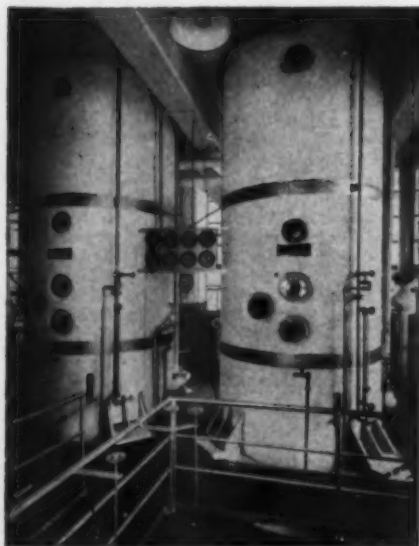
The improved WURSTER & SANGER Soap Lye Evaporator constitutes a marked advance in calandria design. Positive circulation of liquor in a definite direction has proved to increase the rate of evaporation and promote the separation of large crystals.

The WURSTER & SANGER Sweet-Water Evaporator has fulfilled the long need of complete accessibility for cleaning of tubes. It is equipped with an external heating element which affords high liquid velocity and a high rate of heat transfer.

CONTINUOUS GLYCERINE REFINING

Our Continuous Glycerine Refining Plants represent the most modern and economical equipment for the production of Dynamite, High Gravity and C. P. grades from Crude. We have developed a plant which is an improvement over all former methods of distilling glycerine.

Our plants are producing C. P. glycerine in one distillation with low steam consumption and yields of over 98% from Soap Lye Crude. All glycerine is condensed in concentrated form eliminating the handling of sweet-waters. Continuous operation and automatic controls reduce the operating attention to a minimum.



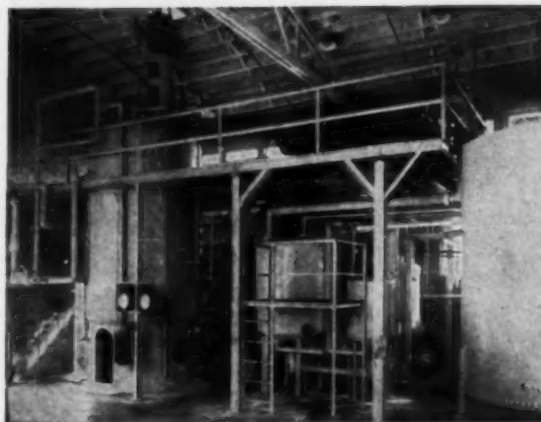
Wurster & Sanger Double Effect Soap Lye Glycerine Evaporator

OIL REFINING AND DEODORIZING PLANTS

WURSTER & SANGER Oil Refining and Deodorizing Plants for the production of edible oils are suitable for cottonseed, corn, soybean, peanut, coconut and other oils. Our equipment, processes and services cover completely all phases of this industry.

FATTY ACID DISTILLATION

WURSTER & SANGER Fatty Acid Distillation Plants, continuous and batch type, are of improved design and construction throughout. Operation is under high vacuum and at low temperature, producing a superior quality of distilled fatty acids with high yields.



Wurster & Sanger Hydrogenation Plant

HYDROGENATION PLANTS

WURSTER & SANGER Oil Hardening Plants are built for partially or completely hardening vegetable oils, fish oils, lard and tallow, for edible and technical purposes.

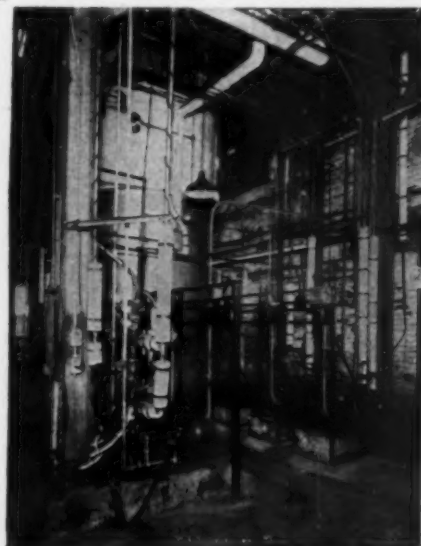
Our plants are simple, efficient and economical in operation and give uniform products of highest quality.

W & S CATALYST REDUCER

The operation of the WURSTER & SANGER Wet Catalyst Reducer is completely automatic, resulting in a uniform catalyst of the greatest activity, longest life and least susceptibility to poisons. The hazards encountered in dry reduction methods are eliminated. Operating costs are extremely low.

SOAP AND SOAP POWDER PLANTS

We specialize in the engineering design of soap plants. Our Spray-Process Soap Powder Plant is producing soap powder at the lowest production cost.



Wurster & Sanger Continuous Fatty Acid Distillation Plant

MOTH PROOFING COMPOUNDS (Contd.)

Koppers Co., White Tar Div., Kearny, N. J.
Kwik Products Co., 451 W. 28th St., N. Y.
Lewis Soap & Chem. Co., 2210 San Pablo Ave., Oakland, Calif.
Merck & Co., Rahway, N. J.
Michigan Chem. Corp., St. Louis, Mich.
Midway Chemical Co., 5235 W. 65th St., Chicago
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Penna. Salt Mfg. Co., 1000 Widener Bldg., Phila.
Per-Mo Products Co., 3604 Woodland Ave., Kansas City, Mo.
Puro Co., 2801 Locust St., St. Louis
Chas. L. Read & Co., 120 Greenwich St., N. Y.
Reilly Tar & Chemical Corp., Indianapolis
Rohm & Haas Co., 222 W. Washington Sq., Philadelphia
Solvay Sales Div., Allied Chem. & Dye Corp., 40 Rector St., New York
Thompson-Hayward Chemical Co., 2915 S. W. Blvd., Kansas City, Mo.
J. A. Tumbler Labs., 423 Hanover St., Baltimore
Joseph Turner Co., Ridgefield, N. J.
Uncle Sam Chem. Co., 573 W. 131st St., N. Y.
U. S. Sanitary Spec. Corp., 435 S. Western Ave., Chicago
Whitmore Research Corp., 339 S. Vandeventer, St. Louis
G. H. Wood & Co., Toronto, Ont., Canada

MOTH SPRAYS (see Household Insecticides, Liquid; Moth Proofing Compounds.)

MOTTLED SOAPS

Lightfoot Schultz Co., Hoboken, N. J.
Los Angeles Soap Co., Los Angeles
National Soap Co., P. O. Box 1613, Tacoma, Wash.
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Schmidt Soap Products Co., 236 W. North Ave., Chicago
John T. Stanley Co., 642 W. 30th St., N. Y.
Swift & Co., Chicago
M. Werk Co., Cincinnati, O.
Allen B. Wrisley Co., 6801 W. 65th St., Chicago

MOUSE SEEDS (see Poisoned Seeds)

MUSKS, ARTIFICIAL (see Aromatic Chemicals)

NAPHTHA (see Solvent Naphtha)

NAPHTHALENE

American-British Chem. Supplies, 180 Madison Ave., Barrett Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
S. H. Bell Co., 1407 Gulf Bldg., Pittsburgh
Dominion Tar & Chem. Co., Ltd., Montreal
E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.
Innis, Speiden & Co., 117 Liberty St., N. Y.
William E. Jordan & Bro., 2590 Atlantic Ave., Brooklyn
Koppers Co., White Tar Div., Kearny, N. J.
Neville Co., Pittsburgh
Reilly Tar & Chem. Corp., Indianapolis
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Standard Naphthalene Prods. Co., S. Kearny, N. J.
Velsicol Corp., 330 E. Grand Ave., Chicago

NAPHTHALENE SULFONATES

Alrose Chem. Co., Box 1294, Providence, R. I.
E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.
General Dyestuffs Corp., 435 Hudson St., N. Y.
National Aniline & Chem. Div., 40 Rector St., N. Y.
Nopco Chem. Co., Harrison, N. J.
Pennsylvania Refining Co., Butler, Pa.
Richard Sales Corp., Jersey City, N. J.
L. Sonneborn Sons, 88 Lexington Ave., N. Y.

NAPHTHENATES (see Copper Naphthenate, Zinc Naphthenate)

NAPHTHENIC ACIDS (and Sulfonic Sludges)

Advance Solvents & Chem. Co., 245-5th Ave., N. Y.
Atlantic Refining Co., 260 Broad St., Philadelphia

General Petroleum Corp., 108 W. 2nd St., Los Angeles
Hummel Chem. Co., 90 West St., N. Y.
Nuodex Prods. Co., Elizabeth, N. J.
Oronite Chem. Co., 200 Bush St., San Francisco 4
Pennsylvania Refining Co., Butler, N. J.
Petroleum By-Products Co., 15 Whitehall St., N. Y.
Petroleum Specialties, Inc., 400 Madison Ave., N. Y.
Shell Petroleum Corp., Shell Bldg., St. Louis
Sherwood Refining Co., Englewood, N. J.
L. Sonneborn Sons, 88 Lexington Ave., N. Y.
Stanco Distributors, Inc., 216 W. 14th St., N. Y.

NICKEL-CLAD EQUIPMENT (see also Soap Machinery)

Allied Steel & Equipment Co., 1007 Springfield Ave., Irvington, N. J.
Edge Moor Iron Wks., Edge Moor, Del.
Houchin Machinery Co., Hawthorne, N. J.
International Nickel Co., 67 Wall St., N. Y.
Alan Porter Lee, Inc., 150 Broadway, N. Y.
Littleford Bros., 453 E. Pearl St., Cincinnati
Lukens Steel Corp., Coatesville, Pa.
H. K. Porter Co., 49th & Harrison Sts., Pittsburgh
F. J. Stokes Machine Co., Philadelphia
Wurster & Sanger, Inc., 5201 S. Kenwood Ave., Chicago

NICOTINE COMPOUNDS

California Spray-Chemical Corp., Lucas & Ortho Way, Richmond, Calif.
Crystal Soap & Chem. Co., 6300 State Rd., Philadelphia
E. I. du Pont de Nemours, Wilmington, Del.
General Chemical Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Hood River Spray Co., Hood River, Ore.
Kemiko Mfg. Co., 500 Chancellor Ave., Irvington, N. J.
Sanocide Spray Co., Fennville, Mich.
Tobacco By-Products & Chem. Corp., Louisville

NITRE CAKE (Sodium Acid Sulfate)

Amer. Agricultural Chem. Co., 50 Church St., N. Y.
Amer. Cyanamid & Chem. Co., 30 Rockefeller Plaza, N. Y.
E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.
Eston Chemicals, Inc., 3100 E. 26th St., Los Angeles
General Chemical Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Chas. Lennig & Co., 222 W. Washington Sq., Philadelphia
Monsanto Chemical Co., 1724 S. 2nd St., St. Louis
Penna. Salt Mfg. Co., Philadelphia
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Sergeant Chem. Co., 7 Dey St., N. Y.

NITROPARAFFINS

Commercial Solvents Corp., 17 E. 42nd St., N. Y.

NON-SOAP DETERGENTS (see Detergents, Synthetic)

NOVELTY SOAPS

Armour & Co., 1355 W. 31st St., Chicago
Illustrated Soap Co., 43 W. 10th St., N. Y.
Lightfoot Schultz Co., 1412 Park Ave., Hoboken, N. J.
Peck's Products Co., 620 E. Clarence Ave., St. Louis
Schmidt Soap Products Co., 236 W. North Ave., Chicago
John T. Stanley Co., 642 W. 30th St., N. Y.
Unique Soaps, P. O. Box No. 61, Covington, Ky.
Allen B. Wrisley Co., 6801 W. 65th St., Chicago

NOZZLES, FOR SPRAY SYSTEMS

Spraying Systems Co., 4027 W. Lake St., Chicago

ODORLESS KEROSENE (see Petroleum Insecticide Base Oils, Deodorized)

OIL, BASE, (see Petroleum Insecticide Base Oils)

OIL HYDROGENATION PLANTS

William Garrigue Co., 9 S. Clinton St., Chicago
Alan Porter Lee, 150 Broadway, N. Y.
Robinson, Butler, Hemingway & Co., Bound Brook, N. J.
Struthers Wells Titusville Corp., Warren, Pa.
Wurster & Sanger, Inc., 5201 S. Kenwood Ave., Chicago

OIL MILL EQUIPMENT

V. D. Anderson Co., 1935 W. 96th St., Cleveland
Bauer Bros. Co., Springfield, O.
Buckeye Iron & Brass Works, Dayton, O.
French Oil Mill Mach. Co., Piqua, O.
William Garrigue Co., 9 S. Clinton St., Chicago
Alan Porter Lee, Inc., 150 Broadway, N. Y.
Robinson, Butler, Hemingway Co., Bound Brook, N. J.
Ernest Scott & Co., Fall River, Mass.
Sprout Waldron & Co., Muncy, Pa.
Stein Equipment Co., 90 West St., N. Y. (Used)
Struthers-Wells Co., Warren, Pa.
Wurster & Sanger, Inc., 5201 S. Kenwood Ave., Chicago

OIL SOAP (see Potash Soaps)

OLEIC ACID (see Red Oil)

OLIVE OIL (Commercial)

(see also Brokers and Dealers)

Irving R. Boody & Co., 120 Wall St., N. Y.
T. G. Cooper & Co., Cedar & Venango Sts., Phila.
Eastern Industries, Inc., Ridgefield, N. J.
W. R. Grace & Co., 7 Hanover Sq., N. Y.
Otto A. C. Hagen Corp., Public Ledger Bldg., Phila.
Leghorn Trading Co., 21 West St., N. Y.
J. H. Redding Co., 17 Battery Pl., N. Y.
Rosenthal Berrow Co., 25 E. 26th St., N. Y.
Sergeant Chem. Co., 7 Dey St., N. Y.
Smith-Weihman Co., 15 Moore St., N. Y.
Welch, Holme & Clark Co., 439 West St., N. Y.

OLIVE OIL FOOTS

(see also Brokers and Dealers)

T. G. Cooper & Co., Cedar & Venango Sts., Phila.
Eastern Industries, Inc., Ridgefield, N. J.
Leghorn Trading Corp., 21 West St., New York
Otto A. C. Hagen Corp., Public Ledger Bldg., Phila.
J. H. Redding Co., 17 Battery Pl., N. Y.
Sergeant Chem. Co., 7 Dey St., N. Y.
Smith-Weihman Co., 15 Moore St., N. Y.
Welch, Holme & Clark Co., 439 West St., N. Y.

OLIVE OIL SOAPS (see Castile Soaps, Textile Soaps)

ORTHODICHLOROBENZENE (see listings under Paradichlorobenzene)

OXALIC ACID

(see also Dealers)

Amer. Cyanamid & Chem. Corp., 30 Rockefeller Plaza, N. Y.
E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.
Faess & Besthoff, Inc., 22 E. 40th St., N. Y.
General Chemical Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Mallinckrodt Chemical Wks., St. Louis, Mo.
Merck & Co., Rahway, N. J.
R. J. Prentiss & Co., 110 William St., N. Y.
Rosenthal Berrow Co., 25 E. 26th St., N. Y.
Sergeant Chem. Co., 7 Dey St., N. Y.
Tamm's Silica Co., 228 N. La Salle St., Chicago
Jos. Turner & Co., Ridgefield, N. J.
Victor Chemical Works, 141 W. Jackson Blvd., Chicago

PACKAGING (for the Trade)

Bonewitz Chemicals, Inc., Burlington, Ia.
Chem. Prods. Co. of N. J., 207 Astor St., Newark, N. J.
Commercial Cleanser Co., 2924 Armitage Ave., Chicago
Emfo Corp., 87 Maiden Lane, N. Y.
Gaylord Chem. Co., 701 Woodswether Rd., Kansas City
R. Gesell, Inc., 206 W. Houston St., N. Y.
Harwin Laboratories, 44 Willow St., Newark, N. J.

McKay-Davis Co., 851 Islington St., Toledo
Packaging Service, 2458 W. 63rd St., Chicago.
Seaboard Mfg. Labs., Tulip & Dauphin Sts., Phila.
Stevens Wiley Mfg. Co., Hancock, Paethorp & W. Berks Sts., Phila. 22, Pa.
Trans-Pac Services, Inc., 602 W. 52nd St., N. Y.
Waverly Mfg. Co., 2133 Orthodox St., Phila.
Van Pell Chem. & Supply Corp., 48 E. First St., N. Y.

PACKAGING MACHINERY (see Cartoning Machy., Filling Machy., Weighing Equip., Wrapping Machy.)

PAILS (Fibre) (see Barrels, Fibre)

PAILS, STEEL (Receptacles), (see Metal Pails)

PAILS, STEEL, (Shipping Containers)

American Can Co., 230 Park Ave., N. Y.
Bennett Mfg. Co., 14600 Princeton Ave., Chicago
Cans, Inc., 3217 W. 47th Pl., Chicago
Central Can Co., 2415 W. 19th St., Chicago
Columbia Can Co., 315 Wyckoff Ave., Brooklyn
Continental Can Co., 100 E. 42nd St., N. Y.
Fein's Tin Can Co., Bush Terminal, Brooklyn
Filter Paper Co., 2464 S. Michigan Ave., Chicago
Gueder, Paeschke & Frey Co., Milwaukee
Inland Steel Container Co., 6532 S. Menard Ave., Chicago
National Can Co., 110 E. 42nd St., N. Y.
National Steel Barrel Co., 3860 E. 91st St., Cleveland
Pittsburgh Can Co., Pittsburgh, Pa.
Pressed Steel Tank Co., 5717 Greenfield Ave., Milwaukee
Rheem Mfg. Co., 570 Lexington Ave., N. Y.
F. C. Thornton Co., 6712 Union Ave., Cleveland
John Trageser Steam Copper Works, Maspeth, L. I.
U. S. Steel Prods. Co., 30 Rockefeller Plaza, N. Y.
Vulcan Stamping & Mfg. Co., Bellwood, Ill.
Wheeling Corrugating Co., Wheeling, W. Va.

PAILS (Wooden)

Beaver Mills, Keene, N. H.
Eagle Woodenware Mfg. Co., Hamilton, O.
Gambrinus Cooperage Works, Louisville
Impervious Package Co., Keene, N. H.
Menasha Woodenware Co., Menasha, Wis.
Richmond Cedar Works, Richmond, Va.

PALM KERNEL OIL

(see also Brokers and Dealers)

Balfour Guthrie & Co., 67 Wall St., N. Y.
Irving R. Boody & Co., 120 Wall St., N. Y.
Durkee Famous Foods, Inc., 2670 Elston Ave., Chicago
Leghorn Trading Corp., 21 West St., N. Y.
Pacific Vegetable Oil Corp., 62 Townsend St., San Francisco, Calif.
Spencer Kellogg & Sons, Buffalo, N. Y.
J. H. Redding Co., 17 Battery Pl., N. Y.
Smith-Weihman Co., 15 Moore St., N. Y.
Welch, Holme & Clark Co., 439 West St., N. Y.
Zimmerman Alderson Carr Co., 25 Broadway, N. Y.

PALM OIL

(see also Brokers and Dealers)

Balfour Guthrie & Co., 67 Wall St., N. Y.
T. G. Cooper & Co., Cedar & Venango Sts., Phila.
E. F. Drew & Co., Wecoline Div., Boonton, N. J.
Eastern Industries, Ridgefield, N. J.
Otto A. C. Hagen Corp., Public Ledger Bldg., Phila.
Pacific Vegetable Oil Corp., 62 Townsend St., San Francisco
J. H. Redding Co., 17 Battery Pl., N. Y.
Smith-Weihman Co., 15 Moore St., N. Y.
Stein, Hall & Co., 285 Madison Ave., N. Y.
Welch, Holme & Clark Co., 439 West St., N. Y.
Zimmerman Alderson Carr Co., 25 Broadway, N. Y.

PALM OIL FATTY ACIDS (see Fatty Acids)

PAPER CANS (see Cans)

PAPER (Corrugated) (see Boxes, Corrugated)

PAPER CUPS

F. N. Burt Co., Batavia, N. Y.
Continental Can Co., 100 E. 42nd St., N. Y.
Individual Drinking Cup Co., Easton, Pa.
Sutherland Paper Co., Kalamazoo, Mich.

PAPER (Fancy Wrapping)

Aluminum Co of America, Gulf Bldg., Pittsburgh
A. M. Collins Mfg. 1518 Walnut St., Phila.
Louis Dejonge & Co., 155-6th Ave., N. Y.
C. J. Fox Co., 236 Ab: on St., Providence, R. I.
Fox Paper Co., Lockland, Cincinnati, O.
Hampden Glazed Paper & Card Co., Holyoke, Mass.
Henderson Lithographing Co., Cincinnati
Keller-Dorian Paper Co., 516 W. 34th St., N. Y.
New England Card & Paper Co., Springfield, Mass.
Pictorial Package Co., Aurora, Ill.
Marquette Lithograph Co., 730 N. Franklin St., Chicago
Nashua Gummed & Coated Paper Co., Nashua, N. H.
Potomac Lithograph Mfg. Co., Washington, D. C.
Richardson Co., Lockland, O.
Geo. Schmitt & Co., 253 Maujer St., Brooklyn
Louis Schulman Co., 465 Broome St., N. Y.
Strobridge Lithographing Co., Cincinnati
Sylvania Industrial Corp., 122 E. 42nd St., N. Y.
Tamm & Co., 61 E. 11th St., N. Y.
Transcello Paper Co., Milwaukee, Wisc.
U. S. Printing & Lithographing Co., Cincinnati, O.
Whiting-Paterson Co., Inc., 320-13th St., Philadelphia
Chas. W. Williams & Co., Inc., 309 Lafayette St., N. Y.

PAPER TOWELS and TISSUES

Brown Co., Portland, Me.
Hoberg Paper & Fibre Co., Green Bay, Wisc.
Scott Paper Co., Chester, Pa.
Straubel Paper Co., Green Bay, Wisc.
Towlsaver, Inc., 2816 E. 11th St., Los Angeles
U. S. Envelope Co., Fulton, N. Y.
U. S. Envelope Co., Lititz Pa.
Victoria Paper Mills Co., Fulton, N. Y.

PARA BLOCKS (see Deodorizing Blocks)

PARADICHLORBENZENE

Dow Chemical Co., Midland, Mich.
E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.
Hooker Electrochemical Co., Niagara Falls, N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Merck & Co., Rahway, N. J.
Monsanto Chemical Co., 1700 S. 2nd St., St. Louis
Naylee Chemical Co., 8001 Frankfort Ave., Phila.
Niagara Alkali Co., 60 E. 42nd St., N. Y.
Phillipp Bros., 70 Pine St., N. Y.
Rid-O-Moth Corp., South Kearny, N. J.
Rosenthal Bercow Co., 25 E. 26th St., N. Y.
Solvay Sales Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.

PARAFFIN

Atlantic Refining Co., 260 S. Broad St., Philadelphia
Borne-Scrymser Co., Elizabeth, N. J.
E. A. Bromund Co., 258 Broadway, N. Y.
Cornelius Products Co., 386 4th Ave., N. Y.
Distributing & Trading Co., 444 Madison Ave., N. Y.
Gulf Refining Co., Pittsburgh
Industrial Raw Materials Corp., 52 Wall St., N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
International Wax Refining Corp., 4415 Third Ave., Bklyn.
Lenape Trading Co., 233 Broadway, N. Y.
George H. Lincks, 155 John St., N. Y.
Oil States Petroleum Co., 233 Broadway, N. Y.
Pennsylvania Refining Co., Butler Pa.

Petroleum Specialties, Inc., 400 Madison Ave., N. Y.
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Sherwood Refining Co., Englewood, N. J.
Sinclair Refining Co., 630-5th Ave., N. Y.
Smith & Nichols, 121 Maiden Lane, N. Y.
Standard Oil Co. (Calif.), 225 Bush St., San Francisco
Standard Oil Co. (Ind.), 910 S. Michigan Ave., Chicago
Standard Oil Co., (N. J.), 26 Broadway, N. Y.
Standard Oil Co. (Ohio), Midland Bldg., Cleveland
F. W. Steadman Co., 59 Pearl St., N. Y.
Strohmeyer & Arpe Co., 139 Franklin St., N. Y.
Texas Co., 135 E. 42nd St., N. Y.
Warwick Chemical Co., 580 5th Ave., N. Y.
Wax & Rosin Prods., 42 Broadway, N. Y.

PARAFFIN OILS

Atlantic Refining Co., 260 S. Broad St., Philadelphia
Deep Rock Oil Corp., 155 N. Clark St., Chicago
Gulf Refining Co., Pittsburgh
Industrial Raw Materials Corp., 52 Wall St., N. Y.
International Wax Refining Corp., 4415 Third Ave., Bklyn.
Oil States Pet. Co., 233 Broadway, N. Y.
Pennsylvania Refining Co., Butler, Pa.
Petroleum Specialties, Inc., 400 Madison Ave., N. Y.
Chas. L. Read & Co., 120 Greenwich St., N. Y.
Sherwood Refining Co., Englewood, N. J.
Sinclair Refining Co., 630-5th Ave., N. Y.
Shell Petroleum Corp., Shell Bldg., St. Louis
Skelly Oil Co., Skelly Bldg., Kansas City, Mo.
L. Sonneborn Sons, 88 Lexington Ave., N. Y.
Standard Oil Co. (Calif.), 225 Bush St., San Francisco
Standard Oil Co. (Ind.), 910 S. Michigan Ave., Chicago
Standard Oil Co. (Ohio), Midland Bldg., Cleveland
F. W. Steadman Co., 59 Pearl St., N. Y.

PARIS GREEN

Ansbacher-Siegle Corp., Rosebank, S. I.
Chemical Service Corp., 82 Beaver St., N. Y.
Chipman Chemical Co., Bound Brook, N. J.
Dow Chemical Co., Midland, Mich.
E. I. du Pont de Nemours Co., Wilmington, Del.
General Chem. Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Reichhold Chemicals, Inc., 105 Bedford Ave., Brooklyn
Rosenthal Bercow Co., 25 E. 26th St., N. Y.
Sherwin-Williams Co., Cleveland

PASTES (see Adhesives)

PATCHOULI OIL (see Essential Oils)

PEANUT OIL

(see also Brokers and Dealers)

Irving R. Boody Co., 120 Wall St., N. Y.
Darling & Co., 4201 S. Ashland Ave., Chicago
Eastern Industries, Inc., Ridgefield, N. J.
Otto A. C. Hagen Corp., Public Ledger Bldg., Phila.
Spencer Kellogg & Sons, Buffalo, N. Y.
Leghorn Trading Co., 21 West St., N. Y.
Pacific Vegetable Oil Corp., 62 Townsend St., San Francisco
J. H. Redding, Inc., 17 Battery Place, N. Y.
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Sergeant Chem. Co., 7 Dey St., N. Y.
Smith-Weihman Co., 15 Moore St., N. Y.
Southern Cotton Oil Co., Produce Exchange, N. Y.
A. E. Starkie, 5461 W. Division St., Chicago
Welch, Holme & Clark, 439 West St., N. Y.

PEARL ASH (see Potassium Carbonate)

PENNYROYAL OIL (see Essential Oils)

PEPPERMINT OIL (see Essential Oils)



**PERFUME OILS FOR:
INSECTICIDES
FLY SPRAYS
THEATER SPRAYS
CLEANSERS
DETERGENTS
POLISHES
DISINFECTANTS
DEODORANT BLOCKS**

In a new product development and old product improvement, the *right* odor is an important sales factor.

If you're having difficulty in procuring the *right* odor for your needs—consult Givaudan! We have an extensive range of highest quality materials to meet your problems.

Long experience in the creation and compounding of perfumes and deodorants for special needs is available for your assistance.

All you need do is send us an unperfumed sample of your product and we will be glad to give recommendations to meet your formula requirements.

Givaudan-Delawanna, Inc.

330 WEST 42nd STREET, NEW YORK 18, N. Y.

Branches: Philadelphia • Los Angeles • Boston • Cincinnati • Detroit • Chicago • Seattle • Montreal • Toronto

PERCOLATORS (for solvent extraction)

Brighton Copper Works, 2161 Kindel Ave., Cincinnati
Arthur Colton Co., Detroit, Mich.
Edge Moor Iron Wks., 30 Rockefeller Plaza, N. Y.
Karl Kiefer Machine Co., 919 Martin St., Cincinnati, O.
Pfauder Co., 89 East Ave., Rochester, N. Y.
Stein Equipment Co., 90 West St., N. Y. (Used)
F. J. Stokes Machine Co., Philadelphia

PERFUME DISSEMINATORS

Ellis Davidson Co., 40 W. 22nd St., N. Y.
Fuld Bros., 702 S. Wolfe St., Baltimore
Hysan Prods. Co., 932 W. 38th Place, Chicago
Robinson Clay Prod. Co., 101 Park Ave., N. Y.
Uncle Sam Chemical Co., 573 W. 131st St., St. N. Y. C.
U. S. Sanitary Specialties Corp., 435 S. Western Ave., Chicago

PERFUMING COMPOUNDS

Albert Albek, Inc., 511 S. Fairfax, Los Angeles
Allondon, Inc., 55 Dey St., N. Y.
American British Chemical Supplies, 180 Madison Ave., N. Y.
van Ameringen-Haebler, Inc., 315 Fourth Ave., N. Y.
Aromatic Products, Inc., 15 E. 30th St., N. Y.
Bendix Chem. Corp., 420 Lexington Ave., N. Y.
Bush Aromatics, Inc., 136 Liberty St., N. Y.
Centflor Mfg. Co., 450 W. 31st St., N. Y.
Ph. Chaleyer, Inc., 160 E. 56th St., N. Y.
Antoine Chiris Co., Inc., 119 W. 57th St., N. Y.
Compagnie Duval, Division of S. B. Penick & Co., 50 Church St., N. Y.
Compagnie Parento, Croton-on-Hudson, N. Y.
Dodge & Olcott, Inc., 180 Varick St., N. Y.
Dow Chemical Co., Midland, Mich.
P. R. Dreyer Inc., 119 W. 19th St., N. Y.
A. C. Drury & Co., 219 East North Water St., Chicago
E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.
Felton Chemical Co., 603 Johnson Ave., Brooklyn
Firmenich & Co., 250 W. 18th St., N. Y.
Fleuroma, Inc., 73 Sullivan St., N. Y.
Florasynth Laboratories, 1513 Olmstead Ave., Bronx
Benj. French, Inc., 160 Fifth Ave., N. Y.
Fritzsche Brothers, Inc., 76 Ninth Ave., N. Y.
General Drug Co., 644 Pacific St., Brooklyn
R. Gesell, Inc., 200 W. Houston St., N. Y.
Givaudan-Delawanna, Inc., 330 W. 42nd St., N. Y.
Gunning & Gunning, 601 W. 26th St., N. Y.
Heine & Co., 54 Cliff St., N. Y.
D. W. Hutchinson & Co., 162 Front St., N. Y.
Hymes Bro. Co., 37 Howard St., N. Y.
Kay-Fries Chemicals, Inc., 180 Madison Ave., N. Y.
Lanoix Chem. Co., 549 W. Randolph St., Chicago
Lautier Fils, 321 Fifth Ave., N. Y.
Pierre Lemoine, 67 Cortland St., N. Y.
Geo. Lueders & Co., 427 Washington St., N. Y.
Magnus, Mabree & Reynard, 16 Desbrosses St., N. Y.
A Maschmeijer, Jr., Inc., 43 W. 16th St., N. Y.
Naugatuck Aromatics, 254 Fourth Ave., N. Y.
Neuman-Buslee & Wolfe, 224 W. Huron St., Chicago
New York Aromatics Co., 5 Beekman St., N. Y.
Norda Essential Oil & Chem. Co., 601 W. 26th St., N. Y.
Noville Essential Oil Co., 157 Cedar St., N. Y.
Orbis Products Corp., 215 Pearl St., N. Y.
Perry Bros., Inc., 220 Flushing Ave., Brooklyn
Polak's Frutal Wks., Inc., 36-14—35th St., L. I. City
Polak & Schwarz, Inc., 667 Washington St., N. Y.
Henri Robert, Inc., 39 W. 60th St., N. Y.
Edward Remus & Co., 11 W. 42nd St., N. Y.
Roure-Dupont, Inc., 366 Madison Ave., N. Y.
H. C. Ryland, Inc., 161 Water St., N. Y.
Schimmel & Co., 601 W. 26th St., N. Y.
Edwin Seebach Co., 912 Broadway, N. Y.
Seeley & Co., 136 Liberty St., N. Y.
C. A. Seguin, 2141 W. North, Chicago
Wm. G. Sibbach & Co., 201 2nd Ave., Maywood, Ill.
Sparhawk Co., Sparkill, N. Y.
Synfleur Scientific Labs., Monticello, N. Y.

Materials for ★ Perfumes ★ Soaps ★ Cosmetics

SOLE AMERICAN REPRESENTATIVE
FOR
TOMBAREL FRERES
GRASSE, FRANCE

SPECIALTIES FOR SOAP

ESSENTIAL OILS

Lavender, Lavandin
Geranium, Patchouly
Ylang, Ylang, Vetiver, etc.

RESINOIDS

Ambranam, Benzoin, Ciste,
Labdanum, Oak Moss
Styrax, etc.

Also—CONCENTRATED PERFUME BASES
for all types of Soaps, Sprays, etc.



PRODUCTS CORPORATION
L. J. ZOLLINGER, PRESIDENT
12 EAST 22nd STREET, NEW YORK 10
CHICAGO—A. C. DRURY & CO., INC.
219 EAST NORTH WATER STREET

Still unexcelled



PHOSPHOROUS PASTE

for ROACHES and RATS

For more than 73 years J-O PHOSPHOROUS PASTE has been recognized by experienced maintenance men as a sure means of pest control with a minimum of effort. Today J-O PASTE still leads the field with its original basic formula. Containing phosphorous, one of the *most potent* of all exterminator chemicals, J-O will keep premises free of roaches and rats, yet is absolutely safe to use. It cannot burn or set fire to other substances and will not harm the hands or skin.

ROACHES of all types can be eliminated quickly and easily with J-O. Just spread a small amount on pieces of raw potato and place wherever roaches appear — around pipes, under sinks, in closets and storerooms. J-O is particularly effective in *damp* places, where powders are impractical.

RATS poisoned by J-O PASTE will usually succumb *outside*, driven to seek air and water to alleviate the distress caused by the phosphorus — a slow-acting poison. Simple to use. Bait is easily prepared.

J-O Phosphorous Paste today is the Recognized Standard

Sold in bulk sizes for repacking (packed in sizes of 25 lbs., 50 lbs., etc.)

Write for Price List

JOHN OPITZ, INC.

Long Island City 4, New York

*Pioneer Manufacturers of
Phosphorous Paste since 1874*

PERFUMING COMPOUNDS (Contd.)

Syntomatic Corp., 114 E. 32nd St., N. Y.
Tombarel Products Corp., 12 E. 22nd St., N. Y.
Ungerer & Co., 161 Sixth Ave., N. Y.
Van Dyk & Co., Belleville, N. J.
Albert Verley, Inc., 440 W. Superior St., Chicago

PETIT GRAIN OIL (see Essential Oils)

PETROLATUM (Petroleum Jelly)

Atlantic Refining Co., 260 S. Broad St., Philadelphia
Borne-Scrymser & Co., Elizabeth, N. J.
Chesebrough Mfg. Co., 17 State St., N. Y.
Industrial Raw Materials Corp., 52 Wall St., N. Y.
Malone Oil Co., 2199 E. 18th St., Cleveland
Pennsylvania Refining Co., Butler, Pa.
Oil States Pet. Co., 233 Broadway, N. Y.
Petroleum Specialties, Inc., 400 Madison Ave., N. Y.
Rosenthal Bercow Co., 25 E. 26th St., N. Y.
Shell Oil Co., 50 W. 50th St., N. Y.
Shell Petroleum Corp., Shell Bldg., St. Louis
Sherwood Refining Co., Englewood, N. J.
Sinclair Refining Co., 630 Fifth Ave., N. Y.
L. Sonneborn Sons, 88 Lexington Ave., N. Y.
Stanco Distributors, Inc., 216 W. 14th St., N. Y.
Standard Oil Co. (Calif.), 225 Bush St., San Francisco
Standard Oil Co. (Ind.), 910 S. Michigan Ave., Chicago
Standard Oil Co. (N. J.), 26 Broadway, N. Y.
F. W. Steadman Co., 59 Pearl St., N. Y.
Welch, Holme & Clark Co., 439 West St., N. Y.

PETROLEUM INSECTICIDE BASE OILS (Base for Household, Cattle and other Insect Oil Sprays, etc.)

American Mineral Spirits Co., 330 S. Mich., Chicago
Anderson-Prichard Oil Corp., Oklahoma City, Okla.
Atlantic Refining Co., 260 S. Broad St., Philadelphia
Beacon Oil Co., Everett, Mass.
Borne Scrymser Co., 632 S. Front St., Elizabeth, N. J.
Commerce Petroleum Co., 2923 Lock St., Chicago
Deep Rock Oil Corp., 155 N. Clark St., Chicago
Empire Oil Co., Oil City, Pa.
Gulf Refining Co., Frick Annex, Pittsburgh
Oil Service Co., Warren, Pa.
Oil States Pet. Co., 233 Broadway, N. Y.
Pennsylvania Refining Co., Butler, Pa.
Pennzoil Co., Oil City, Pa.
Chas. L. Read & Co., 120 Greenwich St., N. Y.
Shell Oil Co., 50 W. 50th St., N. Y.
Shell Petroleum Corp., Shell Bldg., St. Louis
Sherwood Refining Co., Englewood, N. J.
Sinclair Refining Co., 630 Fifth Ave., N. Y.
Skelly Oil Co., Skelly Bldg., Kansas City, Mo.
L. Sonneborn Sons, 88 Lexington Ave., N. Y.
Stanco Distributors, Inc., 216 W. 14th St., N. Y.
Standard Oil Co. (Calif.), 225 Bush St., San Francisco
Standard Oil Co. (Ind.), 910 S. Michigan Ave., Chicago
Standard Oil Co. (N. J.), 26 Broadway, N. Y.
Sun Oil Co., 1608 Walnut St., Philadelphia
Texas Co., 135 E. 42nd St., N. Y.
Tidewater Oil Co., 11 Broadway, N. Y.

PETROLEUM INSECTICIDE BASE OILS, Deodorized

Anderson-Prichard Oil Corp., Oklahoma City, Okla.
Atlantic Refining Co., 260 S. Broad St., Philadelphia
Commerce Petroleum Co., 2923 Lock St., Chicago
Pennsylvania Refining Co., Butler, Pa.
Chas. L. Read & Co., 120 Greenwich St., N. Y.
Shell Oil Co., 50 W. 50th St., N. Y.
Sherwood Petroleum Co., Englewood, N. J.
Sinclair Refining Co., 630-5th Ave., New York
L. Sonneborn Sons, 88 Lexington Ave., N. Y.
Stanco Distributors, Inc., 216 W. 14th St., N. Y.
Standard Oil Co. (Calif.), 225 Bush St., San Francisco
Standard Oil Co. (Ind.), 910 S. Michigan Ave., Chicago

PETROLEUM ETHER (see Ether)

PETROLEUM SULFONATES (see Naphthenic Acids)

PHENOL (Carbolic Acid)

Barrett Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Dow Chemical Co., Midland, Mich.
Heyden Chemical Corp., 393 7th Ave., N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Koppers Co., Koppers Bldg., Pittsburgh, Pa.
Monsanto Chemical Co., 1700 S. 2nd St., St. Louis
Reilly Tar & Chem. Corp., Indianapolis

PHENOL-COEFFICIENT DETERMINATIONS (see Consultants)

PHENYL ACETIC ALDEHYDE (see Aromatic Chemicals)

PHENYL ETHYL ALCOHOL (see Aromatic Chemicals)

pH INDICATORS

Lamotte Chemical Prods., Dept. R., Towson, Baltimore
National Technical Labs., 820 Mission St., South Pasadena, Calif.
Pfaltz & Bauer, 350-5th Ave., N. Y.
W. A. Taylor Co., 7300 York Rd., Baltimore

PHOSPHORUS PASTE

John Opitz, 50-14—39th St., Long Island City, N. Y.
Sennewald Drug Co., 2723 Chouteau Ave., St. Louis

PINE OIL

American Turp. & Tar Co., 810 S. Broad St., New Orleans
E. W. Colledge, General Sales Agent, Inc., P. O. Box 389, Jacksonville, Fla.
Continental Turp. & Rosin Corp., Laurel, Miss.
Crosby Chemicals, Inc., De Ridder, La.

Dixie Pine Prods. Co., Hattiesburg, Miss.
Glidden Co., Naval Stores Div., Jacksonville, Fla.
Gulf Naval Stores Supply Co., Whitney Bldg., New Orleans
Hercules Powder Co., Wilmington, Del.
Industrial Chem. Sales Div., West Va. Pulp & Paper Co., 230 Park Ave., N. Y.
National Turp. Prods. Co., Gulf Point, Fla.
Newport Industries, Inc., 230 Park Ave., N. Y.
Phoenix Naval Stores Co., Gulfport, Miss.
Chas. L. Read & Co., 120 Greenwich St., N. Y.
Southern Pine Chem. Co., Box 389, Jacksonville
Taylor, Lowenstein & Co., Mobile, Ala.
Welch, Holme & Clark Co., 439 West St., N. Y.

PINE OIL DISINFECTANTS (see Disinfectants, Pine Oil)

PINE NEEDLE OIL (see Essential Oils)

PINE SCRUB SOAPS (see also Floor Scrub Soaps)

American Soap & Washoline Co., Cohoes, N. Y.
Ampion Corp., 4-88—47th Ave., L. I. City, N. Y.
Antiseptol Co., 5524 Northwest Highway, Chicago
Armour & Co., 1355 W. 31st St., Chicago
Baird & McGuire, Inc., Holbrook, Mass.
Baum's Castorine Co., Rome, N. Y.
Boston Chemical Industries, 64 E. Brookline St., Boston
Bri-Test Prods. Corp., 845 E. 138th St., New York
Buckingham Wax Corp., Van Dam St. & Borden Ave., L. I. City, N. Y.
Chemical Mfg. & Distrib. Co., Easton, Pa.
Chem. Service Co. of Balto., Howard & West Sts., Balto.
Chemical Supply Co., Plymouth Bldg., Cleveland
Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
Clifton Chemical Co., 62 William St., N. Y.
Churchill Mfg. Co., Galesburg, Ill.

FOR RATS AND MICE * Senco FOR RATS AND MICE

*Senco PHOSPHORUS PASTE

Senco Phosphorus Paste is commonly called rat and roach paste.

It is sold only in bulk to the pest control industry, and to manufacturers of insecticides.

It does not deteriorate with age, and keeps in any climate.

It can be packaged in cans or tubes and sold as YOUR BRAND of rat and roach paste.

Senco POISON GRAINS.

Senco Poison Canary Seed and other Senco Poison Grains are used to control mice. They are not effective against rats.

Senco ARSENIC SOLUTION

Senco Arsenic Solution contains an organic derivative of arsenic.

One gallon diluted with nine gallons of water makes ten gallons of a palatable and toxic drink for rats and mice.

Quotations on request

Sennewald Drug Company, Inc.

2723 Chouteau Avenue
*Reg. U. S. Pat. Office

EST. 1855

St. Louis 3, Missouri

FOR RATS AND MICE * Senco FOR RATS AND MICE

ATTENTION, JOBBER

Add VOLUME and PROFITS to Your Business

Here are the "Sanitary Maintenance"
Products which will do it for you:

OIL SOAPS LIQUID TOILET SOAPS

LIQUID SCRUBBING SOAPS

FLOOR WAXES FLOOR SEAL GYM FINISH

FURNITURE CREAM & POLISH DISINFECTANTS

INSECTICIDES BOWL CLEANER FLY SPRAY

PASTE TYPE MILD ABRASIVE CLEANER

MOTH SPRAY DE-GREASING COMPOUNDS

DEODORANT BLOCKS

THE DAVIES-YOUNG SOAP COMPANY

DAYTON, OHIO

WE SUPPLY JOBBERS ONLY



WRITE OR USE THIS COUPON at once for complete Descriptive Literature, Samples and Prices

THE DAVIES-YOUNG SOAP COMPANY, DAYTON, OHIO

SBB-48

Please send Free Literature, Samples and Prices on "Sanitary Maintenance" Products checked.

☐ OIL SOAPS ☐ LIQUID TOILET SOAPS ☐ LIQUID SCRUBBING SOAPS ☐ FLOOR WAXES ☐ PENETRATING FLOOR SEAL
☐ GYM FINISH ☐ FURNITURE CREAM & POLISH ☐ DISINFECTANTS ☐ INSECTICIDES ☐ BOWL CLEANER ☐ FLY SPRAY
☐ MOTH SPRAY ☐ DE-GREASING COMPOUNDS ☐ PASTE TYPE MILD ABRASIVE CLEANER ☐ DEODORANT BLOCKS

Name Address

City State

PINE SCRUB SOAPS (Contd.)

Davies-Young Soap Co., Dayton, O.
Delta Chemical Co., 4 Payson Ave., N. Y.
Eagle Soap Corp., Huntington, Ind.
Fuld Bros., 702 S. Wolfe St., Baltimore
James Good, Inc., 2116 Susquehanna Ave., Phila.
Haag Laboratories, Inc., 140th & Seeley Ave., Blue Island, Ill.
Harley Soap Co., Pierce & Orthodox Sts., Philadelphia
Higley Chemical Co., Dubuque, Iowa
Hockwald Chem. Co., 135 Mississippi St., San Francisco
R. M. Hollingshead Corp., Camden, N. J.
Hubman Supply Co., 225 N. 4th St., Columbus, O.
Hysan Products Co., 932 W. 38th Place, Chicago
Klix Chem. Co., 2460 Third St., San Francisco
Kranich Soap Co., 60 Richards St., Brooklyn
Lewis Soap & Chem. Co., 2210 San Pablo Ave., Oakland, Calif.
Midland Labs., Dubuque, Ia.
Morgan Chemical Co., Harrisburg, Pa.
Nopco Chem. Co., Harrison, N. J.
Oil-Kraft, Inc., 3330 Beekman St., Cincinnati
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Puritan Chem. Co., 209 Peters St., S. W., Atlanta
Puritan Soap Co., 573 Lyell Ave., Rochester, N. Y.
Rex-Cleanwall Corp., Brazil, Ind.
Theo. B. Robertson Prods. Co., 700 W. Division St., Chicago
Rochester Germicide Co., Rochester, N. Y.
Sanitary Soap Co., 104 Railroad Ave., Paterson, N. J.
Schmidt Soap Products Co., 236 W. North Ave., Chicago
Shawmut Specialty Co., 91 Bickford St., Boston
Skotch Prods. Corp., 2710 Detroit Ave., Cleveland
Solshine Mfg. Co., 412-2nd St., Fall River, Mass.
John T. Stanley Co., Inc., 642 W. 30th St., N. Y.
Superior Soap Corp., 121 Nostrand Ave., Brooklyn
Texas Soap Mfg. Corp., 4905 Calhoun Rd., Houston
Texol Chem. Works, 3 Winter St., Worcester, Mass.
Tesco Chem. Co., P. O. Box 4748, Atlanta
Thompson & Hayward Chem. Co., Kansas City, Mo.
Trio Chem. Wks., 341 Scholes St., Bklyn.
J. A. Tumbler Labs., 423 Hanover St., Baltimore
Uncle Sam Chemical Co., 573 W. 131st St., N. Y. C.
U. S. Sanitary Spec. Corp., 435 S. Western Ave., Chicago
Universal Chem. Corp., 35 E. Market St., Akron, O.
James Varley & Sons, 1200 Switzer Ave., St. Louis
G. H. Wood & Co., Toronto, Canada
Chas. W. Young & Co., 1247 N. 26th St., Phila.

PINE TAR

E. W. Colledge, General Sales Agent, Inc., P. O. Box 389, Jacksonville, Fla.
Crosby Chemicals, Inc., Picayune, Miss.
Glidden Co., Naval Stores, Div., Jacksonville, Fla.
Gulf Naval Stores Supply Co.,
Whitney Bldg., New Orleans
Hercules Powder Co., Wilmington, Del.
Industrial Chem. Sales Div., West Va. Pulp & Paper Co.,
230 Park Ave., N. Y.
Newport Industries, Inc., 230 Park Ave., N. Y.
Southern Pine Chem. Co., Box 389, Jacksonville
Taylor, Lowenstein & Co., Mobile, Ala.

PIPE COILS

Alloy Prods. Corp., 221 Madison St., Waukesha, Wis.
Brighton Copper Works, 2150 Colerain Ave., Cincinnati
Harrisburg Steel Corp., Harrisburg, Pa.
Hartford Tube Products Co., Hartford, Conn.
Houchin Machinery Co., Hawthorne, N. J.
National Pipe Bending Co., New Haven, Conn.
Philadelphia Pipe Bending Co., 4100 N. 5th St., Phila.
Pittsburgh Pipe Coil & Bending Co., Etna, Pa.
Rempe Co., 340 N. Sacramento Blvd., Chicago
Whitlock Coil Pipe Co., Hartford, Conn.

PLANT SPRAYS (see Agricultural Insecticides)

PLATES, STEEL, CORROSION-RESISTANT (see Steel, Corrosion-Resistant)

PLODDERS (see Soap Machinery)

POISONED SEEDS (Poison Grain)

Exterminating Materials Co., 555 W. 22nd St., N. Y.
Fuld Bros., 702 S. Wolfe St., Baltimore, Md.
Hysan Products Co., 932 W. 38th Place, Chicago
O. E. Linck Co., 51 James St., Montclair, N. J.
Sennewald Drug Co., 2723 Chouteau Ave., St. Louis
W. R. Sweeney, Salisbury, Mo.
York Chemical Co., 28 Dean St., Bklyn.

POLISH BASES (see Petroleum Bases)

POLISHES

Ampion Corp., 4-88-47th Ave., L. I. City, N. Y.
Antiseptol Co., 5524 Northwest Highway, Chicago
Armiger Chem. Co., 2155 W. Hubbard St., Chicago
Banner Chemical Prod. Corp., 329 Mulberry St., Newark N. J.
Baum's Castorine Co., 200 Mathew St., Rome, N. Y.
Boston Chemical Industries, 64 E. Brookline St., Boston
Bri-Test Prods. Corp., 845 E. 138th St., New York
Buckingham Wax Corp., Borden Ave. and Van Dam St., L. I. City, N. Y.
Candy & Co., 2515 W. 35th St., Chicago
Cary Mfg. Co., 4917 E. Michigan St., Indianapolis
Chemical Compounding Corp., 262 Huron St., Brooklyn
Chemical Mfg. & Dist. Co., Easton, Pa.
Chem. Service Co. of Balto., Howard & West Sts., Balto.
Chemical Supply Co., Plymouth Bldg., Cleveland
Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
Churchill Mfg. Co., Galesburg, Ill.
Clifton Chemical Co., 62 William St., N. Y.
Cole Laboratories, 22-19 37th Ave., L. I. City, N. Y.
Creco Co., Creco Bldg., L. I. City, N. Y.
Crowell Chemical Co., East Rutherford, N. J.
Davies Young Soap Co., Dayton, O.
Delta Chemical Co., 4 Payson Ave., N. Y.
Eagle Soap Corp., Huntington, Ind.
Elkay Products Corp., 323 W. 16th St., N. Y.
Empire Chem. Prods. Co., 12 Longworth Ave., Newark, N. J.
Federal Varnish Division, S. Ashland Ave. at 29th St., Chicago
Fox Lake Wax Co., Fox Lake, Ill.
Franklin Research Co., 5134 Lancaster Ave., Phila.
Fuld Bros., 702 S. Wolfe St., Baltimore
Gaskill Products, 9 S. Letitia St., Phila.
Golden Star Polish Mfg. Co., 2901 E. 13th St., Kansas City, Mo.
James Good, Inc., 2116 Susquehanna Ave., Phila.
Haag Laboratories, Inc., 140th & Seeley Ave., Blue Island, Ill.
Harley Soap Co., Pierce & Orthodox Sts., Philadelphia
Higley Chemical Co., Dubuque, Iowa
Hockwald Chem. Co., 135 Mississippi St., San Francisco
R. M. Hollingshead Corp., Camden, N. J.
Hubman Supply Co., 225 N. 4th St., Columbus, O.
Hull Co., 305 Washington St., Brooklyn
Hunt Mfg. Co., Lisbon Rd., Cleveland
Hysan Products Co., 932 W. 38th Place, Chicago
Imperial Prods. Co., 1600 Fountain St., Phila.
International Metal Polish Co., Indianapolis
Klix Chem. Co., 2460 Third St., San Francisco
Kemiko Mfg. Co., 500 Chancellor Ave., Irvington, N. J.
J. S. Lawston Co., 8-Henshaw St., N. Y.
Lewis Soap & Chem. Co., Oakland, Calif.
M & H Laboratories, 2703-5 Archer Ave., Chicago
Manhattan Kreole Prods., 172 N. 10th St., Brooklyn
Masury-Young Co., 76 Roland St., Boston
Midland Labs., Dubuque, Ia.
Multi-Clean Prods., 2277 Ford Pkwy., St. Paul
Nopco Chem. Co., Harrison, N. J.
North Coast Soap & Chem. Wks., Seattle, Wash.
Oil Specialties & Refining Co., 18 Bridge St., Bklyn.
Perrow Chemical Co., Hurt, Va.
Pioneer Mfg. Co., 3053 E. 87th St., Cleveland
Puritan Chem. Co., 209 Peters St., S. W., Atlanta
Puritan Soap Co., 573 Lyell Ave., Rochester, N. Y.
Rex-Cleanwall Corp., Brazil, Ind.
Theo. B. Robertson Prods. Co.,
700 W. Division St., Chicago
Scranton Chem. Co., Scranton, Pa.

**IF QUALITY
AND SERVICE ARE
IMPORTANT
TO YOU**



SPECIFY NIAGARA



NIAGARA CAUSTIC POTASH — *Liquid, Flake, Granular or Solid*

is the product of pioneer research and manufacture. Quality and good service are assured by our long experience in producing and handling this product.

NIAGARA CAUSTIC SODA — *Liquid, Flake or Solid*

is famous for its purity—indicated by its remarkably white and uniform color. Liquid shipped in tank cars of 8,000 and 10,000 gallons.

NIAGARA CARBONATE OF POTASH — *Calcined, Hydrated and Liquid 47%*

is the first to be made in this country. Niagara has always set the standard for American manufacture of this product. Specify Niagara for quality and uniformity.

NIAGARA PARADICHLOROBENZENE

is distinguished for the fine, white uniformity of its crystals. It is available in any size or type of container you prefer... and is produced to meet the most exacting demands.

NIAGARA TETRACHLORO PHTHALIC ANHYDRIDE

is a new and versatile industrial chemical for which Niagara has developed a manufacturing process. It is suggested for use as an intermediate or compounding material for the manufacture of dyes, esters, synthetic rubbers, pharmaceuticals, plasticizers, insulating materials, fungicides, protective coatings, lubricants and synthetic resins.

NIAGARA LIQUID CHLORINE

Niagara EBG Liquid Chlorine is backed by advanced knowledge and experience that can be of continuous value to obtaining best results from its use. A new 48-page booklet giving essential data on applications, characteristics, physical properties and handling is available on request.

An Essential Part of America's Great Chemical Enterprise

NIAGARA ALKALI COMPANY

60 East 42nd Street, New York 17, N. Y.

Caustic Potash • Caustic Soda • Paradichlorobenzene • Carbonate of Potash • Liquid Chlorine • Niagathal (Tetrachloro Phthalic Anhydride)

POLISHES (Contd.)

Seaboard Distributors, 60 Park Pl., Newark, N. J.
 Selig Co., 336 Marietta St., Atlanta, Ga.
 Shawmut Specialty Co., 313 Centre St., Boston
 Shell Oil Co., 50 W. 50th St., N. Y.
 Sherolite Products, 1775 Bdway, N. Y.
 Skotch Prods. Corp., 2710 Detroit Ave., Cleveland
 Slick-Shine Co., 207 Astor St., Newark, N. J.
 Solshine Mfg. Co., 412—2nd St., Fall River, Mass.
 S. S. Stafford, Inc., 603 Washington St., N. Y.
 Standard Oil Co. (Calif.), 225 Bush St., San Francisco
 Standard Oil Co. (Ind.), 910 S. Michigan Ave., Chicago
 Standard Oil Co. (Ohio), Midland Bldg., Cleveland
 H. F. Staples Co., Medford, Mass.
 Superior Soap Corp., 121 Nostrand Ave., Brooklyn
 Texas Soap Mfg. Corp., 4905 Calhoun Rd., Houston
 Texol Chem. Works, 3 Winter St., Worcester, Mass.
 Tesco Chem. Co., P. O. Box 4748, Atlanta
 Transmotive Labs., 2550 S. Mich. Ave., Chicago
 Trio Chem. Wks., 341 Scholes St., Bklyn.
 J. A. Tumbler Labs., 423 Hanover St., Baltimore
 Twin City Shellac Co., 340 Flushing Ave., Bklyn.
 Two-Laq Chemical Co., 25 No. Portland Ave., Brooklyn
 Uncle Sam Chemical Co., 573 W. 131st St., N. Y. C.
 U. S. Sanitary Specialties Corp.,
 435 S. Western Ave., Chicago
 Universal Chem. Corp., 35 E. Market St., Akron, O.
 Victory Chem. Co., 148 Fairmont Ave., Phila.
 Victory Soap & Chemical Co., 252—3rd St., Brooklyn,
 N. Y.
 T. F. Washburn Co., 2244 Elston Ave., Chicago
 Wilco Co., 6800 McKinley Ave., Los Angeles
 Windsor Wax Co., 611 Newark St., Hoboken, N. J.
 G. H. Wood & Co., Toronto, Canada

POTASH CAUSTIC

(see also Dealers)

American Cyanamid & Chem. Corp.,
 30 Rockefeller Plaza, N. Y.

Diamond Alkali Co., 535 Smithfield St., Pittsburgh
 E. I. du Pont de Nemours & Co., Wilmington
 Innis, Speiden & Co., 117 Liberty St., N. Y.
 Niagara Alkali Co., 60 E. 42nd St., N. Y.
 Solvay Sales Div., Allied Chem. & Dye Corp., 40 Rector
 St., N. Y.
 Jos. Turner & Co., Ridgefield, N. J.
 Welch, Holme & Clark Co., 439 West St., N. Y.
 Westvaco Chlorine Prods. Co., 405 Lexington Ave., N. Y.

POTASH SOAPS (Soft Soaps, Liquid Soaps, Shampoo Soaps, etc.)

American Soap & Washoline Co., Cohoes, N. Y.
 Ampion Corp., 4-88—7th Ave., L. I. City, N. Y.
 Antiseptol Co., 5524 Northwest Highway, Chicago
 Armour Soap Wks., 1355 W. 31st St., Chicago
 Arrow Laboratories, 236 W. North Ave., Chicago
 Banner Chemical Products Corp., 60 Elm St., Newark,
 N. J.
 Baums Castorine Co., 200 Mathew St., Rome, N. Y.
 Boston Chemical Industries, 64 E. Brookline St., Boston
 Bri-Test Prods. Corp., 109 Ave. L, Newark, N. J.
 Buckingham Wax Co., 51-03 Van Dam St., L. I. City, N. Y.
 Carlstadt Chem. Co., Carlstadt, N. J.
 Chemical Mfg. & Distrib. Co., Easton, Pa.
 Chemical Service Co., Baltimore
 Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
 Churchill Mfg. Co., Galesburg, Ill.
 Clifton Chemical Co., 62 William St., N. Y.
 Cole Labs., 22-19 37th Ave., L. I. City, N. Y.
 James Counts Soap Co., 2nd & Washington Aves.,
 St. Louis, Mo.
 Creco Co., Creco Bldg., L. I. City, N. Y.
 Cudahy Packing Co., 221 N. La Salle St., Chicago
 Davies Young Soap Co., Dayton, Ohio
 E. F. Drew & Co., 15 E. 26th St., New York
 Eagle Soap Corp., Huntington, Ind.
 J. Eavenson & Sons, Del. & Penn Sts., Camden, N. J.
 Essential Chemicals, 3286 N. 33rd St., Milwaukee.
 A. C. Fergusson Co., Drexel Bldg., Phila.

JOBBER!
 We have
 the
SOLUTION
 for your
CLEANING
PROBLEMS

Write for Description,
 Samples and Price List

OUR NEWLY IMPROVED LIQUID CLEANSERS—

Zephyr-Brite

The better neutral cleanser. Compounded to give the maximum in economy for the safe, thorough cleansing of fine surfaces. Zephyr-Brite does more than dissolve the dirt and grime in the pores of the floors—it floats this dirt to the surface for easy removal. A more concentrated cleanser which enhances the beauty and prolongs the life of better floors and other fine surfaces.

Veg-O-Scrub

A new high in the low-priced field. Made from pure vegetable oils — economical — efficient and neutral in action. A clear, viscous and uniform product. Especially recommended for cleaning wood, linoleum, asphalt tile, terrazzo and composition floors—WILL NOT INJURE ANY WASHABLE SURFACE.

Also Manufacturers of

Liquid Shampoos • Liquid Toilet Soaps • Surgical Soaps • Vegetable Oil Jelly Soaps
 Disinfectants • Polishing Cloths • Liquid Metal Polish • Specialty Products

HAAG

LABORATORIES, Inc.

14006 SEELEY AVENUE • P. O. BOX 114 • BLUE ISLAND, ILLINOIS

LIQUID SOAP SPECIALISTS

KRANICH SOAPS*

STANDARD BASE SOAPS

Cocoanut Oil Standard, 60% concentrated
Cocoanut Oil, Crystalline, 50% concentrated
Castile Soap Base

POWDERED SOAPS

Cocoanut Oil (180 lb. barrel)
U. S. P. Castile (50-lb. Boxes only)

LIQUID TOILET SOAPS

COCOANUT OIL STANDARD
40% Concentrated
Also 30%, 20%, 10%

ALL CONTAINERS CHARGED EXTRA

55 gal. Solutionizer Drum
55 gal. Drums (Standard)
55 gal. Drums (Open-head)
30 gal. Drums (Standard)

*Returnable for cash refund when empty.
Freight charges our expense.*

COLORS

Natural, opal, green, lemon, tar, etc.

*In Kranich Soaps there is always positive assurance of
uniform quality and dependable working results.*

VEGETABLE OIL SOAPS

Soft Potash, 40% Anhydrous
Hard Potash, 65% Anhydrous
U. S. P. XIIth Green Soap

LIQUID SCRUBBING SOAPS

Pine Scrubbing Soap 22% Anhydrous
Sassafrass Scrubbing Soap 20% Anhydrous
Odorless Scrubbing Soap 20% Anhydrous

LIQUID SOAP SHAMPOOS

COCOANUT OIL SOAP SHAMPOO
(Castor Blend)
40%-30%
Concentrated

LIQUID CASTILE SOAP SHAMPOO

30% Standard
Concentration

ALL PERFUMES CHARGED EXTRA

Bouquet and tar
Lemon, mint and pine needle
*Kranich Service assures attention to requirements,
careful handling and prompt shipment of orders.*

ALL PRICES F.O.B. NEW YORK

Terms: 1% 10 days; Net 30 Days.
All Prices are Subject to Change Without Notice.

*ALL SOAPS MANUFACTURED
FROM FATTY ACIDS DISTILLED
AND OILS REFINED BY US.

KRANICH SOAP COMPANY, Inc.

54-60 RICHARDS STREET

Founded 1921

BROOKLYN 31, NEW YORK

27 YEARS IN BUSINESS IS A TESTIMONIAL TO THE STANDARD QUALITY OF OUR PRODUCTS

POTASH SOAPS (Contd.)

Fuld Bros., 702 S. Wolfe St., Baltimore
 Genseke Bros., W. 48th Pl. & Whipple St., Chicago, Ill.
 James Good, Inc., 2116 Susquehanna Ave., Phila.
 Haag Laboratories, Inc., 140th & Seeley Ave., Blue Island, Ill.
 Harley Soap Co., Pierce & Orthodox Sts., Philadelphia
 Higley Chemical Co., Dubuque, Iowa
 Hockwald Chem. Co., 135 Mississippi St., San Francisco
 R. M. Hollingshead Corp., Camden, N. J.
 Hubman Supply Co., 225 N. 4th St., Columbus, Ohio
 Hysan Products Co., 932 W. 38th Place, Chicago
 Imperial Prods. Co., 1600 Fountain St., Phila.
 J. Chemical Works, 602 W. 37th St., N. Y.
 Jansen Soap & Chemical Co., 324 Leavenworth St., San Francisco, Cal.
 Klix Chem. Co., 2460 Third St., San Francisco
 Kranich Soap Co., 54 Richards St., Brooklyn
 Lanair Chem. Corp., 236 W. North Ave., Chicago
 Laurel Soap Mfg. Co., Tioga & Almond Sts., Philadelphia
 Long Island Soap Co., Meeker Ave. & Bridgewater St., Brooklyn
 Los Angeles Soap Co., Los Angeles, Calif.
 M. & H. Laboratories, 2705 Archer Ave., Chicago
 Masury-Young Co., 76 Roland St., Boston
 Midland Labs., Dubuque, Ia.
 National Soap Co., 357 South 25th St., Tacoma, Wash.
 Nopco Chem. Co., Harrison, N. J.
 North Coast Chem. & Soap Wks., Seattle, Wash.
 N. Y. Soap Co., 258 Third St., Brooklyn
 Oil-Kraft, Inc., 3330 Beekman St., Cincinnati
 Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
 Procter & Gamble Co., Cincinnati, O.
 Puritan Soap Co., 573 Lyell Ave., Rochester, N. Y.
 Chas. L. Read & Co., 120 Greenwich St., N. Y.
 R. G. A. Laboratories, 145 W. 45th St., N. Y.
 Riverside Chem. Co., N. Tonawanda, N. Y.
 Theo. B. Robertson Prods. Co., 700 W. Division St., Chicago
 Rochester Germicide Co., Rochester, N. Y.
 Royal Soap & Chem. Co., 511 S. Central Ave., Los Angeles
 Rubon Woodfinishing & Prods. Co., 500 W. 7th St., Kansas City, Mo.
 Sanitary Soap Co., 104 Railroad Ave., Paterson, N. J.
 Schaeffer Bros. & Powell Mfg. Co., 102 Barton St., St. Louis, Mo.
 Skotch Prods. Corp., 2710 Detroit Ave., Cleveland
 Solshine Mfg. Co., 44 Brookline St., Cambridge, Mass.
 Standard Oil Co. (Ohio), Midland Bldg., Cleveland
 John T. Stanley Co., 642 W. 30th St., N. Y.
 Superior Soap Corp., 121 Nostrand Ave., Brooklyn
 Tech Soap Co., 125 W. 46th Place, Chicago, 9
 Tesco Chem. Co., P. O. Box 4748, Atlanta
 Texas Soap Mfg. Corp., 4905 Calhoun Rd., Houston
 Thompson-Hayward Chemical Co., Kansas City, Mo.
 Tremco Mfg. Co., 393 East 131st St., Cleveland
 Trio Chem. Wks., 341 Scholes St., Bklyn.
 Uncle Sam Chem. Co., 573 W. 131st St., N. Y.
 U. S. Sanitary Specialties Corp., 435 S. Western Ave., Chicago
 Victory Soap & Chemical Co., 252—3rd St., Brooklyn, N. Y.
 Warren Soap Mfg. Co., 51 Waverly St., Cambridge, Mass.
 G. H. Wood & Co., Toronto, Canada
 Chas. W. Young & Co., 1247 N. 26th St., Philadelphia

POTASSIUM CARBONATE

American Cyanamid & Chemicals Corp., 30 Rockefeller Plaza, N. Y.
 J. T. Baker Chem. Co., Phillipsburg, N. J.
 Croton Chem. Corp., 114 Liberty St., N. Y.
 Diamond Alkali Co., 535 Smithfield St., Pittsburgh
 E. I. du Pont de Nemours & Co., Wilmington, Del.
 Industrial Chem. Sales Div., West Va. Pulp & Paper Co., 230 Park Ave., N. Y.
 Innis, Speiden & Co., 127 Liberty St., N. Y.
 Harshaw Chem. Co., Cleveland
 Merck & Co., Rahway, N. J.
 Niagara Alkali Co., 60 E. 42nd St., N. Y.
 Chas. L. Read & Co., 120 Greenwich St., N. Y.
 Sergeant Chem. Co., 7 Dey St., N. Y.

Solvay Sales Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
 Jos. Turner & Co., Ridgefield, N. J.
 Welch, Holme & Clark Co., 439 West St., N. Y.

POTASSIUM PERSULFATE

American Cyanamid & Chemicals Corp., 30 Rockefeller Plaza, N. Y.
 J. T. Baker Chem. Co., Phillipsburg, N. J.
 Buffalo Elec. Chem. Co., River Rd., Buffalo, N. Y.
 E. I. du Pont de Nemours & Co., Wilmington, Del.
 Merck & Co., Rahway, N. J.
 Penn. Salt Mfg. Co., Widener Bldg., Phila.
 Sergeant Chem. Co., 7 Dey St., N. Y.
 Jos. Turner & Co., Ridgefield, N. J.

POTASSIUM SILICATE

E. I. du Pont de Nemours & Co., Wilmington, Del.
 Philadelphia Quartz Co., 125 S. 3rd St., Philadelphia
 Welch, Holme & Clark Co., 439 West St., N. Y.

POURING SPOUTS (see Can Spouts, Closures)

POWDERED SOAP (see Soap, Powdered) Do not confuse with Soap Powders)

PREMIUMS

Anchor Hocking Glass Corp., Lancaster, O. (glassware)
 Goody Mfg. Co., 15 E. 22nd St., N. Y. (novelties)
 Hazel-Atlas Co., Wheeling, W. Va. (glassware)
 Holgate Co., Kane, Pa. (woodenware toys)
 Keystone Processed Prods. Co., 633 Broadway, N. Y.

PRESSES (Automatic Soap)

Consolidated Prods. Co., 15 Park Row, N. Y. (Used)
 First Machy. Corp., 157 Hudson St., N. Y. (Used)
 Houchin Machinery Co., Hawthorne, N. J.
 R. A. Jones & Co., Cincinnati, O.
 Newman Tallow & Soap Machy. Co., 1051 W. 35th St., Chicago (Used)
 A. H. Ross & Co., P.O. Box 998, Dayton, O.
 Stein Equipment Co., 90 West St., N. Y. (Used)

PRESSES (Foot and Hand Lever for Soap and Para Cakes)

Consolidated Prods. Co., 15 Park Row, N. Y. (Used)
 First Machy. Corp., 157 Hudson St., N. Y. (Used)
 Houchin Machinery Co., Hawthorne, N. J.
 Huber Machine Co., 259 46th St., Brooklyn
 Newman Tallow & Soap Machy. Co., 1051 W. 35th St., Chicago
 Stein Equipment Co., 90 West St., N. Y. (Used)
 F. J. Stokes Mach. Co., Philadelphia, Pa.

PRIVATE FORMULAS (see under individual products)

PRIVATE LABEL PACKAGING, FILLING (see packaging for the trade)

PUMICE

California Industrial Minerals Co., Friant, Calif.
 Chas. B. Chrystal Co., 53 Park Pl., N. Y.
 Pacific Coast Pumice Co., Bishop, Calif.
 Pumice Corp. of America, Grants, N. M.
 Wm. P. Rogers, 44 Woodman St., Lynn, Mass.
 Tamms Silica Co., 228 N. La Salle St., Chicago
 Chas. A. Wagner Co., 813 Callowhill St., Phila.
 Whittaker, Clark & Daniels, 260 W. Bway., N. Y.

PUMPS

Aldrich Pump Co., 1 Pine St., Allentown, Pa.
 Allied Steel & Equipt. Co., 1007 Springfield Ave., Irvington, N. J.
 Alsop Engineering Corp., 103 Green St., Milldale, Conn.

PUMPS (Contd.)

Allied Steel & Equip. Co., 1007 Springfield Ave., Irvington, N. J.
 American Steam Pump Co., Battle Creek, Mich.
 Beach-Russ Co., 50 Church St., N. Y.
 Blackmer Pump Co., Grand Rapids, Mich.
 S. F. Bowser & Co., Ft. Wayne, Ind.
 Buffalo Forge Co., 490 Broadway, Buffalo, N. Y.
 Consolidated Prods. Co., 15 Park Row, N. Y. (Used)
 M. T. Davidson Co., 154 Nassau St., N. Y.
 Eastern Engineering Co., 45 Fox St., New Haven, Conn.
 Filter Paper Co., 2464 S. Michigan Ave., Chicago
 First Machy. Corp., 157 Hudson St., N. Y. (Used)
 Foster Pumps, Inc., 51 Washington St., Brooklyn, N. Y.
 Goulds Pumps, Inc., Seneca Falls, N. Y.
 Joshua Hendy Iron Wks., Pomona, Calif.
 Houshain Machinery Co., Hawthorne, N. J.
 Ingersoll-Rand Co., 11 Broadway, N. Y.
 Jabsco Pump Co., 2031 N. Lincoln St., Burbank, Calif.
 Karl Kiefer Machine Co., 919 Martin St., Cincinnati
 H. K. Porter Co., 49th & Harrison Sts., Pittsburgh
 Lobe Pump & Machine Co., Buffalo, N. Y.
 Newman Tallow & Soap Machy. Co., 1051 W. 35th St., Chicago (Used)
 Oberdorfer Foundries, Inc., 5100 Thompson Rd., Syracuse, N. Y.
 P. H. & F. M. Roots Co., Connersville, Ind.
 H. K. Porter Co., Oliver Bldg., Pittsburgh
 Satisfaction Supply Co., 508 W. Broadway, N. Y.
 Scientific Filter Co., 12 Franklin Square, N. Y.
 T. Shriver & Co., Harrison, N. J.
 Stein Equipment Co., 90 West St., N. Y. (Used)
 F. J. Stokes Machine Co., Philadelphia, Pa.
 Taber Pump Co., 278 Elm St., Buffalo, N. Y.
 Viking Pump Co., Cedar Falls, Iowa
 Worthington Pump & Machinery Co., 2 Park Ave., N. Y.

PYRETHRUM FLOWERS AND POWDER

Allaire Woodward & Co., Peoria, Ill.
 An-Fo Mfg. Co., 3129 Elmwood Ave., Oakland, Cal.
 Derris, Inc., 79 Wall St., N. Y.
 Greene Trading Co., 70 Pine St., N. Y. (agents for foreign sellers)
 Hammond Paint & Chemical Co., Beacon, N. Y.
 J. L. Hopkins & Co., 220 Broadway, N. Y.
 McCormick & Co., Baltimore, Md.
 McLaughlin, Gormley King Co., 1715 Fifth St., S. E., Minneapolis, Minn.
 S. B. Penick & Co., 50 Church St., N. Y.
 John Powell & Co., 1 Park Ave., N. Y.
 R. J. Prentiss & Co., 110 William St., N. Y.
 Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
 U. S. Industrial Chemicals, Inc., 60 E. 42nd St., N. Y.

PYRETHRUM EXTRACT

Allaire Woodward & Co., Peoria, Ill.
 An-Fo Mfg. Co., 3129 Elmwood Ave., Oakland, Cal.
 Associated Chemists, Inc., 1906 N. Halsted St., Chicago
 Chemical Sales Corp., Pittsburgh 19
 Hammond Paint & Chemical Co., Beacon, N. Y.
 J. L. Hopkins & Co., 220 Broadway, N. Y.
 McCormick & Co., Baltimore
 McLaughlin Gormley King Co., 1715 Fifth St., S. E., Minneapolis
 S. B. Penick & Co., 50 Church St., N. Y.
 John Powell & Co., 1 Park Ave., N. Y.
 R. J. Prentiss & Co., 110 William St., N. Y.
 U. S. Industrial Chemicals, Inc., 60 E. 42nd St., N. Y.

PYROPHYLLITE

Attapulugus Clay Co., 210 W. Washington Sq., Phila.
 Carolina Pyrophyllite Co., 10 E. 40th St., N. Y.
 Chas. B. Chrystal Co., 53 Park Pl., N. Y.
 Dicalite Co., 120 Wall St., N. Y.
 Kennedy Minerals Co., 2550 E. Olympic Blvd., Los Angeles, Cal.
 Pioneer Pyrophyllite Producers, P.O. Box 686, Chulavista, Cal.
 Tamms Silica Co., 229 N. LaSalle St., Chicago
 R. T. Vanderbilt Co., 230 Park Ave., N. Y.
 Whittaker, Clark & Daniels, 260 W. Bway, N. Y.
 Witco Chemical Co., 295 Madison Ave., N. Y.

QUATERNARY AMMONIUM COMPOUNDS

Alrose Chem. Co., Box 1294, Providence, R. I.
 J. T. Baker Chemical Co., Phillipsburg, N. J.
 Carlstadt Chem. Co., Carlstadt, N. J.
 E. I. du Pont de Nemours & Co., Wilmington
 Emulsol Corp., 59 E. Madison St., Chicago
 Fairfield Labs., Inc., 417 Cleveland Ave., Plainfield, N. J.
 James Good Co., Susquehanna Ave. & Martha St., Phila.
 Hooker Electrochemical Co., Niagara Falls, N. Y.
 Merck & Co., Rahway, N. J.
 Monsanto Chemical Co., 1700 S. 2nd St., St. Louis
 Onyx Oil & Chem. Co., Jersey City, N. J.
 Penna. Salt Mfg. Co., Widener Bldg., Phila.
 Rhodes Chemical Corp., 3227 Frankford Ave., Phila.
 Retardex Co., 1 Hanson Pl., Brooklyn
 Richards Chem. Co., Jersey City, N. J.
 Rohm & Haas, 222 W. Washington Sq., Phila.
 E. B. Snyder Labs., 2137 E. Harold St., Philadelphia
 Universal Chlorinator Co., 3418 W. Pico Blvd., Los Angeles
 James Varley & Sons, 1200 Switzer Ave., St. Louis
 Winthrop Chem. Co., 1450 Broadway, N. Y.
 G. H. Wood & Co., Toronto, Ont., Canada

QUATERNARY AMMONIUM DISINFECTANTS (See Disinfectants, Quaternary Ammonium)

RAPESEED OIL

Balfour, Guthrie & Co., 67 Wall St., N. Y.
 Irving R. Boody & Co., 120 Wall St., N. Y.
 T. G. Cooper & Co., Cedar & Venango Sts., Phila.
 Otto A. C. Hagen Corp., Public Ledger Bldg., Phila.
 Pacific Vegetable Oil Corp., 62 Townsend St., San Francisco
 J. H. Redding, Inc., 17 Battery Pl., N. Y.
 Sergeant Chem. Co., 7 Dey St., N. Y.
 Werner G. Smith Co., 2191 W. 110th St., Cleveland
 Smith-Weihman Co., 15 Moore St., N. Y.
 A. E. Starkie, 5461 W. Division St., Chicago
 Arthur C. Trask Co., 4103 S. La Salle St., Chicago
 Welch, Holme & Clark Co., 439 West St., N. Y.

RAT EXTERMINATING PRODUCTS

An-Fo Mfg. Co., 3129 Elmwood Ave., Oakland, Calif.
 Barton Chem. Co., 3907 S. Langley Ave., Chicago
 Cenol Co., 4250 N. Pulaski Ave., Chicago
 Chem. Service Co. of Balto., Howard & West Sts., Balto.
 Chemical Supply Co., Plymouth Bldg., Cleveland
 Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
 Corn King Co., Cedar Rapids, Ia.
 E. I. du Pont de Nemours & Co., Wilmington
 Eagle Soap Corp., Huntington, Ind.
 Elkay Products Co., 323 W. 16th St., N. Y.
 Exterminating Materials Co., 555 W. 22nd St., N. Y.
 Fuld Bros., 702 S. Wolfe St., Baltimore
 Goulard & Olena, Inc., 140 Liberty St., N. Y.
 Foote Mineral Co., 1609 Summer St., Philadelphia
 Hockwald Chem. Co., 135 Mississippi St., San Francisco
 Hysan Products Co., 932 W. 38th Place, Chicago
 Imperial Prods. Co., 1600 Fountain St., Phila.
 Innis, Speiden & Co., 117 Liberty St., N. Y.
 Ketoid Chem. Co., 339 S. Van Deventer, St. Louis
 Lethelin Products Co., Mt. Vernon, N. Y.
 Lewis Soap & Chem. Co., 2210 San Pablo Ave., Oakland, Calif.
 O. E. Linck Co., 51 James St., Montclair, N. J.
 Maywood Pest Exterminators, Maywood, Ill.
 Monsanto Chem. Co., 1700 S. 2nd St., St. Louis
 John Opitz, Inc., 50-14 39th St., Long Island City, N. Y.
 S. P. Penick & Co., 50 Church St., N. Y. C.
 Per-Mo Products Co., 3604 Woodland Ave., Kansas City, Mo.
 Pest Control Supply Co., 210 N. Western Ave., Los Angeles
 Pfaltz & Bauer, Inc., 350 Fifth Ave., N. Y.
 John Powell & Co., 1 Park Ave., N. Y.
 R. J. Prentiss & Co., 110 William St., N. Y.
 Rat Laboratories, Inc., 112 Broad St., N. Y.
 Sennewald Drug Co., 2723 Chouteau Ave., St. Louis
 Sparhawk Co., Sparkill, N. Y.



U.S.I.

**INSECTICIDE
MATERIALS**

**new
pyrenone*
concentrates**

FOR
AGRICULTURAL DUSTS & SPRAYS
HORTICULTURAL SPRAYS
HOUSEHOLD SPRAYS
LIVESTOCK AND DAIRY SPRAYS
AEROSOLS, AND OTHER USES

**standard
pyrethrum &
rotenone
materials**

**PYRETHRUM EXTRACT NO. 20—AND HIGHER
PURIFIED PYRETHRUM EXTRACT 20%
IMPREGNATED PYRETHRUM DUST CONCENTRATES
PYRETHRUM OLEORESINS
PYRETHRUM POWDERS
ROTENONE POWDERS (CUBE AND DERRIS)
ROTENONE RESINS (CUBE AND DERRIS)**

U.S.I.

INDUSTRIAL CHEMICALS, INC.

60 East 42nd Street, New York 17, N. Y.

Branches in all principal cities

CANADIAN AGENTS: STANDARD CHEMICAL COMPANY LIMITED • 195 FLEET STREET E., TORONTO, CANADA

RAT EXTERMINATING PRODUCTS (Contd.)

Sur-Rid Prods. Co., 455 Paul Brown Bldg., St. Louis
J. A. Tumbler Labs., 423 Hanover St., Baltimore
Uncle Sam Chemical Co., 573 W. 131st St., N. Y. C.
U. S. Sanitary Specialties Corp.,
435 S. Western Ave., Chicago
Victory Chem. Co., 148 Fairmount Ave., Philadelphia
York Chemical Co., 23 Dean St., Bklyn.

RAT POISONS (see Squills, Phosphorous Paste, Thallium Sulfate, etc.)

RED OIL (Oleic Acid)

(see also Brokers and Dealers)

American British Chem. Supplies, Inc.,
180 Madison Ave., N. Y.
American Cyanamid & Chemicals Corp.,
30 Rockefeller Plaza, N. Y.
Armour Chem. Div., 1355 W. 31st St., Chicago
Celina Stearic Acid Co., Celina, Ohio
Century Stearic Acid Candle Works, 41 E. 42nd St., N. Y.
Darling & Co., 4201 S. Ashland Ave., Chicago
E. F. Drew & Co., Wecoline Div., Boonton, N. J.
Eastern Industries, Ridgely, N. J.
Emery Industries, Inc., 4300 Carew Tower, Cincinnati
Griffin Chem. Co., 1000 16th St., San Francisco
A. Gross & Co., 295 Madison Ave., N. Y.
Otto A. C. Hagen, Public Ledger Bldg., Philadelphia
W. C. Hardesty Co., 41 E. 42nd St., N. Y.
Procter & Gamble Co., Cincinnati
Sergeant Chem. Co., 7 Dey St., N. Y.
Theobald Industries, Kearny, N. J.
Arthur C. Trask Co., 4108 S. La Salle St., Chicago
Welch, Holme & Clark Co., 439 West St., N. Y.
M. Werk Co., St. Bernard, Cincinnati
Wilson-Martin Co., Snyder Ave. & Swanson St.,
Philadelphia
Woburn Chem. Corp., Harrison, N. J.

REFINING EQUIPMENT (Glycerine)

E. B. Badger Co., 25 Pitts St., Boston
Buffalo Foundry & Machine Co., Buffalo, N. Y.
Consolidated Prods. Co., 15 Park Row, N. Y. (Used)
First Machy. Corp., 157 Hudson St., N. Y. (Used)
William Garrigue & Co., 9 S. Clinton St., Chicago
Alan Porter Lee, Inc., 150 Broadway, N. Y.
Lancaster Iron Works, 564 S. Prince St., Lancaster, Pa.
Newman Tallow & Soap Machy. Co., 1051 W. 35th St.,
Chicago (Used)
Ernest Scott & Co., Fall River, Mass.
Struthers-Wells Co., Warren, Pa.
Walter E. Simmons Co., Boston
Stein Equipment Co., 90 West St., N. Y. (Used)
Swenson Evaporator Co., Harvey, Ill.
Wurster & Sanger, Inc., 5201 S. Kenwood Ave., Chicago

REFRIGERATING EQUIPMENT

H. Loeb & Son, 4600 Lancaster Ave., Philadelphia
York Ice Machine Co., York, Pa.

REMELTERS

Houchin Machinery Co., Hawthorne, N. J.
Huber Machine Co., 259 46th St., Brooklyn
Lancaster Iron Works, 564 S. Prince St., Lancaster, Pa.
Patterson Foundry & Mach. Co., East Liverpool, O.
Patterson-Kelley Co., East Stroudsburg, Pa.
Struthers-Wells Co., Warren, Pa.
Wurster & Sanger, Inc., 5201 Kenwood Ave., Chicago

RESINS, SYNTHETIC

American Cyanamid & Chem. Corp., 30 Rockefeller
Plaza, N. Y.
Bakelite Corp., 300 Madison Ave., N. Y.
Barrett Div., Allied Chem. & Dye Corp., 40 Rector
St., N. Y.
Dures Plastics, Inc., North Tonawanda, N. Y.
Hercules Powder Co., Wilmington, Del.
General Electric Co., Bridgeport, Conn.

Krumbhaar Chemicals, Inc., South Kearney, N. J.
Monsanto Chem. Co., 1700 S. 2nd St., Louis
Neville Co., Pittsburgh, Pa.
Paramet Div., Libbey-Owens-Ford Glass Co., Toledo
Reilly Tar & Chem. Corp., Indianapolis
Reichhold Chemicals, Inc., Detroit
Resinous Prods. & Chem. Corp., 222 W. Washington Sq.,
Philadelphia
Velsicol Corp., 330 E. Grand Ave., Chicago
Warwick Chemical Co., West Warwick, R. I.
U. S. Industrial Chemicals, Inc., Lincoln Bldg., N. Y.

RESPIRATORS

Davis Emergency Equipment Co., 55 Vandam Ave.,
New York
Electric Sprayit Co., Sheboygan, Wis.
Mine Safety Appliances Co., Braddock and Thomas Sts.,
Pittsburgh

RHODINOL (see Aromatic Chemicals)

ROACH PASTE

John Opitz, Inc., 50-14 39th St., L. I. City, N. Y.
Sennewald Drug Co., 2723 Chouteau Ave., St. Louis

ROACH POWDERS (see Household Insecticides, Powder)

ROSE OIL (see Essential Oils)

ROSEMARY OIL (see Essential Oils)

ROSIN

Antwerp Naval Stores Co., Savannah, Ga.
E. W. Colledge, General Sales Agent, P. O. Box 389,
Jacksonville, Fla.
Continental Turp. & Rosin Corp., Laurel, Miss.
Crosby Chemicals, Inc., De Ridder, La.
Dixie Pine Prods. Co., Hattiesburg, Miss. (wood)
Georgia Rosin Prods. Co., Brunswick, Ga.
Glidden Co., Naval Stores Div.,
P. O. Box 380, Jacksonville, Fla.
Hercules Powder Co., Wilmington, Del. (wood)
Industrial Chem. Sales Div., West Va., Pulp & Paper Co.,
230 Park Ave., N. Y.
Newport Industries, Inc., 230 Park Ave., N. Y.
Phoenix Naval Stores Co., Gulfport, Miss. (wood)
Chas. L. Read & Co., 120 Greenwich St., N. Y.
Southern Pine Chem. Co., Box 389, Jacksonville
Taylor, Lowenstein & Co., Mobile, Ala.
Wax & Rosin Prods., 42 Broadway, N. Y.
Welch, Holme & Clark Co., 439 West St., N. Y.

ROSIN SOAPS (Saponified Rosins)

Chemical Mfg. & Dist. Co., Easton, Pa.
Chem. Service Co. of Balto., Howard & West Sts., Balto.
Crystal Soap & Chem. Co., 6300 State Rd., Philadelphia
James Good, Inc., 2116 E. Susquehanna Ave., Philadelphia
Haskins Bros. & Co., Omaha
Hercules Powder Co., Wilmington
Nopco Chem. Co., Harrison, N. J.
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Theo. B. Robertson Prods. Co., 700 W. Division St.,
Chicago
Sanitary Soap Co., 104 Railroad Ave., Paterson, N. J.
John T. Stanley Co., 642 W. 30th St., N. Y.
Texas Soap Mfg. Corp., 4905 Calhoun Rd., Houston
G. H. Wood & Co., Toronto, Ont., Canada
Chas. W. Young & Co., 1247 N. 26th St., Philadelphia

ROTENONE FORMULATIONS (see also Derris)

Agicide Laboratories, 1717 Taylor Ave., Racine, Wis.
Associated Chemists, Inc., 1906 N. Halsted, Chicago
California Spray-Chemical Corp., Lucas & Ortho Way,
Richmond, Calif.
Chipman Chem. Co., Bound Brook, N. J.
Derris, Inc., 79 Wall St., N. Y.
Greene Trading Co., 70 Pine St., N. Y. (agents for
foreign sellers)

ROTENONE FORMULATIONS (Contd.)

Hammond Paint & Chem. Co., Beacon, N. Y.
J. L. Hopkins & Co., 220 Broadway, N. Y.
Jooster & Janssen, 132 Front St., N. Y.
Ketoid Chem. Co., 549 W. Washington, Chicago
Lenape Trading Co., 233 Broadway, N. Y.
McCormick & Co., Baltimore, Md.
Orbis Products Corp., 215 Pearl St., N. Y.
S. B. Penick & Co., 50 Church St., N. Y.
John Powell & Co., 1 Park Ave., N. Y.
R. J. Prentiss & Co., 110 William St., N. Y.
U. S. Indus. Chemicals, Inc., 60 E. 42nd St., N. Y.
Whitmire Research Corp., 339 Vandeventer, St. Louis

ROTTEN STONE (see Abrasives and Fillers)

RUBBER STOPPERS (see Laboratory Apparatus)

RUG and UPHOLSTERY CLEANERS

Alrose Chem. Co., Box 1294, Providence, R. I.
Ampion Corp., 4-88—47th Ave., L. I. City, N. Y.
An-Fo Mfg. Co., 3129 Elmwood Ave., Oakland, Calif.
Bri-Test Prods. Corp., 845 E. 138th St., New York
Buckingham Wax Corp., Van Dam St. & Borden Ave.,
L. I. City
Candy & Co., 2515 W. 35th St., Chicago
Carlstadt Chem. Co., Carlstadt, N. J.
Chemical Mfg. & Dist. Co., Easton, Pa.
Chem. Service of Balto., Howard & West Sts., Balto.
Chemical Supply Co., Plymouth Bldg., Cleveland
Churchill Mfg. Co., Galesburg, Ill.
Clifton Chemical Co., 62 William St., N. Y.
Cole Laboratories, 22-19 37th Ave., L. I. City, N. Y.
Crystal Soap & Chem. Co., 6300 State Rd., Philadelphia
Davies-Young Soap Co., Dayton, O.
Eagle Soap Corp., Huntington, Ind.
Fuld Bros., 702 S. Wolfe St., Baltimore
Gaylord Chem. Co., 701 Woodswether Rd., Kansas City,
Mo.
James Good, Inc., 2116 Susquehanna Ave., Phila.
Haag Laboratories, Blue Island, Ill.
Higley Chem. Co., Dubuque, Iowa
Hild Floor Machine Co., 1313 W. Randolph St., Chicago
Hockwald Chem. Co., 135 Mississippi St., San Francisco
Arnold Hoffman Co., Providence, R. I.
Hubman Supply Co., 225 N. 4th St., Columbus, O.
Hysan Prods. Co., 932 W. 38th Place, Chicago
Imperial Prods. Co., 1600 Fountain St., Phila.
Kwik Products Co., 451 W. 28th St., N. Y.
Lorenz Chem. Co., 135 N. 32nd Ave., Omaha
M & H Laboratories, 2705 Archer Ave., Chicago
M. Michel & Co., 90 Broad St., N. Y.
Midland Labs., Dubuque, Ia.
Multi-Clean Prods., Inc., 2277 Ford P'kway, St. Paul,
Minn.
Nopco Chem. Co., Harrison, N. J.
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Per-Mo Products Co., 3604-B Woodland Ave., Kansas City
Phila. Quartz Co., 125 S. 3rd St., Philadelphia
Rex-Cleanwall Corp., Brazil, Ind.
Theo. B. Robertson Prods. Co.,
700 W. Division St., Chicago
E. B. Snyder Labs., 2137 E. Harold St., Philadelphia
Skotch Prods. Corp., 2710 Detroit Ave., Cleveland
Tech Soap Co., 125 W. 46th Pl., Chicago
Tesco Chem. Co., P. O. Box 4748, Atlanta
Texas Soap Mfg. Corp., 4905 Calhoun Rd., Houston
Texol Chem. Works, 3 Winter St., Worcester, Mass.
Thompson-Hayward Chem. Co., 2915 S. W. Blvd.,
Kansas City, Mo.
Transmotive Labs., 2550 S. Michigan Ave., Chicago
Trio Chem. Wks., 341 Scholes St., Bklyn.
J. A. Tumbler Labs., 423 Hanover St., Baltimore
Ultra Chem. Wks., 2 Wood St., Paterson, N. J.
Uncle Sam Chemical Co., 573 W. 131st St., N. Y. C.
U. S. Sanitary Specialties Corp., 435 S. Western Ave.,
Chicago
Universal Chem Corp., 35 E. Market St., Akron, O.
James Varley & Sons, 1200 Switzer Ave., St. Louis
Washine-National Sands, Inc., 37-02 Northern Blvd.,
Long Island City

Wilco Co., 6800 McKinley Ave., Los Angeles
G. H. Wood & Co., Toronto, Ont., Canada
Chas. W. Young & Co., 1247 N. 26th St., Philadelphia

SADDLE SOAP

Armour & Co., 1355 W. 31st St., Chicago
Asco Chemical Co., 641 Lexington Ave., Brooklyn
Baum's Castorine Co., Rome, N. Y.
Chem. Service Co. of Balto., Howard & West Sts., Balto.
Crystal Soap & Chem. Co., 6300 State Rd., Philadelphia
Davies-Young Soap Co., Dayton, O.
James Good, Inc., 2116 Susquehanna Ave., Phila.
Harley Soap Co., Pierce & Orthodox Sts., Philadelphia
R. M. Hollingshead Corp., Camden, N. J.
Hysan Prods. Co., 932 W. 38th Place, Chicago
Lorenz Chem. Co., 135 N. 32nd Ave., Omaha
Nopco Chem. Co., Harrison, N. J.
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Theo. B. Robertson Prods. Co.,
700 W. Division St., Chicago
Rome Soap Mfg. Co., Rome, N. Y.
John T. Stanley Co., 642 W. 30th St., N. Y.
Superior Soap Corp., 121 Nostrand Ave., Brooklyn
J. A. Tumbler Labs., 423 Hanover St., Baltimore
Windsor Wax Co., 611 Newark St., Hoboken, N. J.
G. H. Wood & Co., Toronto, Ont., Canada

SAL AMMONIAC (see Ammonium Chloride)

SAL SODA

(see also Dealers)

American Cyanamid & Chemicals Corp.,
30 Rockefeller Plaza, N. Y.
Church & Dwight Co., 70 Pine St., N. Y.
Diamond Alkali Co., 535 Smithfield St., Pittsburgh
E. I. du Pont de Nemours & Co., Wilmington, Del.
Emeryville Chem. Co., 405 Montgomery St., San Francisco
General Chemical Div., Allied Chem. & Dye Corp., 40
Rector St., N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Mathieson Chemical Corp., 60 E. 42nd St., N. Y.
Mechling Bros. Chemical Co., Camden, N. J.
Pittsburgh Plate Glass Co., Columbia Chem. Div.,
Grant Bldg., Pittsburgh
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Sergeant Chem. Co., 7 Dey St., N. Y.
Solvay Sales Div., Allied Chem. & Dye Corp., 40 Rector
St., N. Y.
Joseph Turner & Co., Ridgefield, N. J.
Welch, Holme & Clark Co., 439 West St., N. Y.

SALT (Common Salt)

(see also Dealers)

Diamond Alkali Co., 533 Smithfield St., Pittsburgh
Dow Chemical Co., Midland, Mich.
Hooker Electrochemical Co., Niagara Falls, N. Y.
International Salt Co., 475 Fifth Ave., N. Y.
Jefferson Salt & Mining Co., Louisville, Ky.
LeRoy Salt Co., LeRoy, N. Y.
Michigan Chem. Corp., St. Louis, Mich.
Myles Salt Co., 1007 Camp St., New Orleans, La.
Penn. Salt Mfg. Co., Widener Bldg., Phila.
Pittsburgh Plate Glass Co., Columbia Chemical Div.,
Grant Bldg., Pittsburgh
Pomeroy Salt Co., Pomeroy, Ohio
Remington Salt Co., Ithaca, N. Y.
Saginaw Salt Prods. Co., Saginaw, Mich.
Solvay Sales Div., Allied Chem. & Dye Corp., 40 Rector
St., N. Y.
Jos. Turner & Co., Ridgefield, N. J.
Welch, Holme & Clark Co., 439 West St., N. Y.

SALT WATER SOAP (Marine Soaps)

Antara Prods. Div., Gen. Aniline & Film Corp., 444
Madison Ave., N. Y.
Antiseptol Co., 5524 Northwest Highway, Chicago

SALT WATER SOAP (Contd.)

Armour Soap Wks., 1355 W. 31st St., Chicago
Buck-Jack Co., 3056 Federal St., Baltimore
Carlstadt Chem. Co., Carlstadt, N. J.
J. Eavenson & Sons, Camden, N. J.
Hewitt Soap Co., Dayton, O.
Hockwald Chem. Co., 135 Mississippi St., San Francisco
Kamen Soap Prods., Woolworth Bldg., N. Y.
Los Angeles Soap Co., Los Angeles
MacKenzie Labs., Front & Yarnall Sts., Chester, Pa.
Miranol Chemical Co., P.O. Box 118, Milltown, N. J.
Nopeo Chem. Co., Harrison, N. J.
Newell-Gutrad Co., San Francisco
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Procter & Gamble Co., Cincinnati, O.
Sanitary Soap Co., 104 Railroad Ave., Paterson, N. J.
John T. Stanley Co., 642 W. 30th St., N. Y.
Swift & Co., Chicago
M. Werk Co., Cincinnati

SAMPLE CASES

Arrow Mfg. Co., 15th & Hudson Sts., Hoboken, N. J.
Knickerbocker Case Co., 2311 N. Crawford Ave., Chicago

SANDALWOOD OIL (see Essential Oils)

SAPONIN (Ext. Soap Bark)

Dodge & Olcott, Inc., 180 Varick St., N. Y.
A. C. Drury & Co., 219 East North Water St., Chicago
Enco Chem. Corp., 441 Lexington Ave., N. Y.
Florasynth Labs., 1513 Ohmstead Ave., Bronx, N. Y.
Fritzsche Brothers, Inc., 76 Ninth Ave., N. Y.
Hoffman-La Roche, Inc., Nutley, N. J.
Interstate Color Co., 5 Beekman St., N. Y.
Geo. Lueders & Co., 427 Washington St., N. Y.
Magnus, Mabree & Reynard, 16 Desbrosses St., N. Y.
Merck & Co., Rahway, N. J.
S. B. Penick & Co., 50 Church St., N. Y.
R. J. Prentiss & Co., 110 William St., N. Y.
Schimmel & Co., 601 W. 26th St., N. Y.
Ungerer & Co., 161 Sixth Ave., N. Y.

SASSAFRAS, Artificial (see Aromatic Chemicals)

SCOURING POWDERS

American Soap Powder Wks., Inc., 98 Van Dyke St., Brooklyn
American Soap & Washoline Co., Cohoes, N. Y.
Armour & Co., 1355 W. 31st St., Chicago
Baum's Castorine Co., 200 Mathew St., Rome, N. Y.
Buck-Jack Co., 3056 Federal St., Baltimore
Chemical Mfg. & Distrib. Co., Easton, Pa.
Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
Churchill Mfg. Co., Galesburg, Ill.
Colgate-Palmolive-Peet Co., Jersey City, N. J.
Cowles Detergent Co., 7016 Euclid Ave., Cleveland
Cudahy Packing Co., 221 N. La Salle St., Chicago
Du Bois Soap Co., Cincinnati, O.
Eagle Soap Corp., Huntington, Ind.
Fuld Bros., 702 S. Wolfe St., Baltimore
Hercules Powder Co., Wilmington, Del.
Higley Chem. Co., Dubuque, Iowa
Hockwald Chem. Co., 135 Mississippi St., San Francisco
Hubman Supply Co., 225 N. 4th St., Columbus, O.
Hysan Prods., 932 W. 38th Place, Chicago
Imperial Products Co., 1600 Fountain St., Phila.
Jansen Soap & Chemical Co., 324 Leavenworth St., San Francisco, Cal.
Kamen Soap Prods. Co., Woolworth Bldg., N. Y.
J. F. Kerns Chem. Prods., 2239 S. Michigan Ave., Chicago
Los Angeles Soap Co., 617 E. First St., Los Angeles
MacKenzie Labs., Front & Yarnall Sts., Chester, Pa.
Midland Labs., Dubuque, Ia.
National Milling & Chem. Co., Manayunk, Philadelphia
Miranol Chemical Co., P.O. Box 118, Milltown, N. J.
Pacific Chem. Co., 1412 N. Main St., Los Angeles
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Penna. Salt Mfg. Co., 1000 Widener Bldg., Philadelphia

Pittsburgh Plate Glass Co., Columbia Chemical Div., Grant Bldg., Pittsburgh

Port Huron Detergent Co., Port Huron, Mich.
Procter & Gamble Co., Cincinnati
Puritan Chem. Co., 209 Peters St., S.W., Atlanta
Theo. B. Robertson Prods. Co., 700 W. Division St., Chicago
Sanitary Soap Co., 104 Railroad Ave., Paterson, N. J.
Solvay Sales Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
S. & S. Soap Co., 324 Barretto St., Bronx, N. Y.
Skotch Prods. Corp., 2710 Detroit Ave., Cleveland
John T. Stanley Co., 642 W. 30th St., N. Y.
Stevens Soap Corp., 200 Sullivan St., Brooklyn
Swift & Co., Chicago
Tesco Chem. Co., P. O. Box 4748, Atlanta
Texas Soap Mfg. Corp., Houston, Texas
U. S. Sanitary Specialties Corp., 435 S. Western Ave., Chicago
Victory Soap & Chem. Co., 252 Third St., Bklyn.
Warren Soap Mfg. Co., 51 Waverly St., Cambridge, Mass.
Warwick Chemical Co., West Warwick, R. I.
G. H. Wood & Co., Toronto, Ont., Canada
Allen B. Wrisley Co., 6801 W. 65th St., Chicago
Wyandotte Chem. Corp., Wyandotte, Mich.
Chas. W. Young & Co., 1247 N. 26th St., Philadelphia

SCOURING SOAPS (Bars)

American Soap & Washoline Co., Cohoes, N. Y.
Armour Soap Works, 1355 W. 31st St., Chicago
Baum's Castorine Co., Rome, N. Y.
Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
Cudahy Packing Co., 221 N. La Salle St., Chicago
James Good, Inc., 2116 E. Susquehanna Ave., Philadelphia
Hewitt Soap Co., Dayton, O.
Los Angeles Soap Co., Los Angeles
National Soap Co., P. O. Box 1631, Tacoma, Wash.
Peck's Products Co., St. Louis
Port Huron Detergent Co., Port Huron, Mich.
Procter & Gamble Co., Cincinnati, O.
Theo. B. Robertson Prods. Co., 700 W. Division St., Chicago
Schmidt Soap Products Co., 236 W. North Ave., Chicago
Skotch Prods. Corp., 2710 Detroit Ave., Cleveland
John T. Stanley Co., 642 W. 30th St., N. Y.
Swift & Co., Chicago
Warren Soap Mfg. Co., 51 Waverly St., Cambridge, Mass.
Allen B. Wrisley Co., 6801 W. 65th St., Chicago
Chas. W. Young & Co., 1247 N. 26th St., Phila.

SCREENS (Screening and Sifting Equipment)

Allied Steel & Equip. Co., 1007 Springfield Ave., Irvington, N. J.
C. O. Bartlett & Snow Co., 6200 Harvard Ave., Cleveland, O.
B. F. Gump Co., 412 S. Clinton St., Chicago
J. H. Day Co., Cincinnati
J. M. Lehmann Co., Lyndhurst, N. J.
Ludlow-Sayer Wire Co., St. Louis, Mo.
Orville Simpson Co., 1230 Knowlton St., Cincinnati
Simplicity Engineering Co., Durand, Mich.
Sprout, Waldron & Co., Muncy, Pa.
Stedman's Fdy. & Machine Works, Aurora, Ind.
Stein Equipment Co., 90 West St., N. Y. (Used)
Stephens-Adamson Mfg. Co., Aurora, Ill.
Sturtevant Mill Co., Boston, Mass.
W. S. Taylor Co., Cleveland, O.
Wickwire Spencer Steel Co., 500—5th Ave., N. Y.

SCRUBBING MACHINES (see Floor Machines)

SCRUBBING SOAPS, LIQUID (see Floor Scrub Soaps)

SEALING MACHINERY (Bags)

Allied Steel & Equip. Co., 1007 Springfield Ave., Irvington, N. J.
B. F. Gump Co., 412 S. Clinton St., Chicago
New Jersey Machine Corp., Hoboken, N. J.
Stokes & Smith Co., 4915 Summerdale Ave., Philadelphia
Weigh Right Automatic Scale Co., Joliet, Ill.

SEALING MACHINERY (Cartons)

Allied Steel & Equipment Co., 1007 Springfield Ave.,
Irvington, N. J.
Burt Machine Co., 401 E. Oliver St., Baltimore
Consolidated Products Co., 15 Park Row, N. Y. (Used)
J. L. Ferguson Co., Joliet, Ill.
First Machy. Corp., 157 Hudson St., N. Y. (Used)
Hornney & Co., 420 Lexington Ave., N. Y.
Houchin Machinery Co., Hawthorne, N. J.
Johnson Automatic Sealer Co., Battle Creek, Mich.
R. A. Jones & Co., Cincinnati, O.
Karl Kiefer Machine Co., 919 Martin St., Cincinnati
New Jersey Machine Corp., Hoboken, N. J.
Newman Tallow & Soap Machy. Co., 1051 W. 35th St.,
Chicago (Used)
Pneumatic Scale Corp., North Quincy, Mass.
F. B. Redington Co., 112 S. Sangamon St., Chicago
Stein Equipment Corp., 90 West St., N. Y. (Used)
Stokes & Smith Co., 4915 Summerdale Ave., Philadelphia
Triangle Package Machinery Co., 906 Spaulding Ave.,
Chicago
Weigh Right Automatic Scale Co., Joliet, Ill.

SEEDS, POISONED (see Poisoned Seeds)

SESQUICARBONATE OF SODA (for Bath Salts, etc.), (see Sodium Sesquicarbonate)

SHAMPOO BASE and LIQUID (SOAP BASE)

Ampion Corp., 4-88 47th Ave., L. I. City, N. Y.
Antara Prods. Div., Gen. Aniline & Film Corp., 444
Madison Ave., N. Y.
Antiseptol Co., 5524 Northwest Highway, Chicago
Armour Soap Wks., 1355 W. 31st St., Chicago
Baum's Castorine Co., 200 Mathew St., Rome, N. Y.
Borne Scrymser Co., 632 S. Front St., Elizabeth, N. J.
Boston Chemical Industries, 64 E. Brookline St., Boston
Bri-Test Prods. Corp., 845 E. 138th St., New York
Buckingham Wax Co., Van Dam St. & Borden Ave.,
L. I. City, N. Y.
Carlstadt Chem. Co., Carlstadt, N. J.
Chemical Mfg. & Dist. Co., Easton, Pa.
Chemical Compounding Corp., 262 Huron St., Bklyn, N.Y.
Chem. Service of Balto., Howard & West Sts., Balto.
Chemical Supply Co., Plymouth Bldg., Cleveland
Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
Clifton Chemical Co., 62 William St., N. Y.
Columbia Soap & Chem. Co., Inc., 324 Leavenworth St.,
San Francisco
James Counts Soap Co., 2nd and Washington Aves.,
St. Louis
Crystal Soap & Chem. Co., 6300 State Rd., Philadelphia
Davies-Young Soap Co., Dayton, O.
Delta Chemical Co., 4 Payson Ave., N. Y.
E. F. Drew & Co., 15 E. 26th St., New York
Eagle Soap Corp., Huntington, Ind.
J. Eavenson & Sons, Camden, N. J.
Emulsol Corp., 59 E. Madison St., Chicago
Essential Chemicals, 744 N. 4th St., Milwaukee
Fairfield Labs., Inc., 417 Cleveland Ave., Plainfield, N. J.
Fuld Bros., 702 S. Wolfe St., Baltimore
Gaylord Chem. Co., 701 Woodswether Rd., Kansas City
James Good, Inc., 2116 Susquehanna Ave., Phila.
Haag Laboratories, Inc., 140th & Seeley Ave., Blue Island,
Ill.
Higley Chemical Co., Dubuque, Iowa
Hockwald Chem. Co., 135 Mississippi St., San Francisco
R. M. Hollingshead Corp., Camden, N. J.
Harley Soap Co., Pierce & Orthodox Sts., Phila.
Hysan Prods. Co., 932 W. 38th Place, Chicago
Hubman Supply Co., 225 N. 4th St., Columbus, O.
Jansen Soap & Chemical Co., 324 Leavenworth St., San
Francisco, Cal.
Kranich Soap Co., 60 Richards St., Brooklyn
Lewis Soap & Chem. Co., Oakland, Calif.
Los Angeles Soap Co., 617 E. First St., Los Angeles
Manhattan Kreole Prods., 172 N. 10th St., Brooklyn
M. Michel & Co., 90 Broad St., N. Y.
Midland Labs., Dubuque, Ia.
Miranol Chem. Co., P. O. Box 118, Milltown, N. J.
Naphthole, Inc., 15 E. 26th St., N. Y.
Nopco Chem. Co., Harrison, N. J.
N. Y. Soap Co., 258 Third St., Brooklyn

Oil-Kraft, Inc., 3330 Beekman St., Cincinnati
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Procter & Gamble Co., Cincinnati
Richards Sales Corp., Warren and Morris Sts., Jersey
City, N. J.
Theo. B. Robertson Prods. Co., 700 W. Division St.,
Chicago
Rochester Germicide Co., Rochester, N. Y.
Sanitary Soap Co., 104 Railroad Ave., Paterson, N. J.
Sanitax Brush & Prods. Co., 230 E. Ohio St., Chicago
Schaeffer Bros. & Powell Mfg. Co., 102 Barton St.,
St. Louis
Schmidt Soap Products Co., 236 W. North Ave., Chicago
L. Sonneborn Sons, 88 Lexington Ave., N. Y.
John T. Stanley Co., 624 W. 30th St., N. Y.
Superior Soap Corp., 121 Nostrand Ave., Bklyn., N. Y.
Swift & Co., Chicago
Tech Soap Mfg. Co., 125 W. 46th Pl., Chicago
Tesco Chem. Co., P. O. Box 4748, Atlanta
Texas Soap Mfg. Corp., 4905 Calhoun Rd., Houston
Thompson-Hayward Chem. Co., Kansas City, Mo.
Trio Chem. Wks., 341 Scholes St., Bklyn.
J. A. Tumbler Labs., 423 Hanover St., Baltimore
Ultra Chem. Wks., 2 Wood St., Paterson, N. J.
Uncle Sam Chemical Co., 573 W. 131st St., St. N. Y. C.
U. S. Sanitary Specialties Corp., 435 S. Western Ave.,
Chicago
Universal Chem. Corp., 35 E. Market St., Akron, O.
Warren Soap Mfg. Co., 51 Waverly St., Cambridge, Mass.
G. H. Wood & Co., Toronto, Canada
Allen B. Wrisley Co., 6801 W. 65th St., Chicago
Chas. W. Young & Co., 1247 N. 26th St., Phila.

SHAMPOOS, POWDER AND CAKE

Armour & Co., 1355 W. 31st St., Chicago
Arrow Laboratories, 236 W. North Ave., Chicago
Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
Davies-Young Soap Co., Dayton, O.
Emulsol Corp., 59 E. Madison St., Chicago
Kranich Soap Co., 60 Richards St., Brooklyn
Lanair Chem. Corp., 236 W. North Ave., Chicago
Lightfoot Schultz Co., 1412 Park Ave., Hoboken, N. J.
Nopco Chem. Co., Harrison, N. J.
North Coast Chem. & Soap Wks., Seattle, Wash.
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
John Powell & Co., 1 Park Ave., N. Y.
Procter & Gamble Co., Cincinnati
Richards Sales Corp., Jersey City, N. J.
Sanitary Soap Co., 104 Railroad Ave., Paterson, N. J.
Schmidt Soap Products Co., 236 W. North Ave., Chicago
Superior Soap Corp., 121 Nostrand Ave., Bklyn., N. Y.
Warren Soap Mfg. Co., 51 Waverly St., Cambridge, Mass.
Allen B. Wrisley Co., 6801 W. 65th St., Chicago

SHAMPOOS, SOAPLESS

Alrose Chem. Co., Box 1294, Providence, R. I.
Antara Prods. Div., Gen. Aniline & Film Corp., 444
Madison Ave., N. Y.
Boston Chemical Industries, 64 E. Brookline St., Boston
Carlstadt Chem. Co., Carlstadt, N. J.
Chem. Service Co. of Balto., Howard & West Sts., Balto.
Davies-Young Soap Co., Dayton, O.
Emulsol Corp., 59 E. Madison St., Chicago
Fairfield Labs., Inc., 417 Cleveland Ave., Plainfield, N. J.
Fuld Bros., 702 S. Wolfe St., Baltimore
General Drug Co., 644 Pacific St., Brooklyn
Higley Chemical Co., Dubuque, Iowa
Hockwald Chem. Co., 135 Mississippi St., San Francisco
R. M. Hollingshead Corp., Camden, N. J.
Hysan Prods. Co., 932 W. 38th Place, Chicago
Lewis Soap & Chem. Co., Oakland, Calif.
Los Angeles Soap Co., 617 E. First St., Los Angeles
M. Michel & Co., 90 Broad St., N. Y.
Miranol Chemical Co., P. O. Box 118, Milltown, N. J.
Monsanto Chem. Co., 1700 S. 2nd St., St. Louis
Nopco Chem. Co., Harrison, N. J.
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Procter & Gamble Co., Cincinnati
Richards Sales Corp., Warren and Morris Sts., Jersey
City, N. J.
Rohm & Haas Co., 222 W. Washington Sq., Phila.
Sherwood Refining Co., Englewood, N. J.
Skotch Prods. Corp., 2710 Detroit Ave., Cleveland

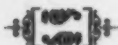
SHELLAC

Orange and White

MONTAN WAX
CANDELILLA WAX
CARNAUBA WAX
and High M.P. Substitute
OURICURY WAX
BEESWAX

All Types
Crude and Refined

ARGENTINE CASEIN



WM. DIEHL & CO.

336 W. 42nd St.

New York 18, N. Y.

Phone: BRyant 9-5211

SHAMPOOS, SOAPLESS (Contd.)

E. B. Snyder Labs., 2137 E. Harold St., Philadelphia
L. Sonneborn Sons, Inc., 88 Lexington Ave., N. Y.
U. S. Sanitary Spec. Corp., 435 S. Western Ave., Chicago
Ultra Chem. Wks., 2 Wood St., Paterson, N. J.

SHAVING CREAM (Soap and Brushless)

Cenol Co., 4250 N. Pulaski Ave., Chicago
Eagle Soap Corp., Huntington, Ind.
Lightfoot Schultz Co., 1412 Park Ave., Hoboken, N. J.
Nopco Chem. Co., Harrison, N. J.
Procter & Gamble Co., Cincinnati
Richards Sales Corp., Warren and Morris Sts., Jersey City, N. J.
Schmidt Soap Products Co., 236 W. North Ave., Chicago
John T. Stanley Co., 642 W. 30th St., N. Y.
Allen B. Wisley Co., 6801 W. 65th St., Chicago

SHAVING CREAM BASE

Mirano Chemical Co. P. O. Box 118, Milltown, N. J.
Nopco Chem. Co., Harrison, N. J.
Schmidt Soap Products Co., 236 W. North Ave., Chicago
Allen B. Wisley Co., 6801 W. 65th St., Chicago

SHAVING SOAP (Cake, Stick, Powder)

Arrow Laboratories, 236 W. North Ave., Chicago
Colgate-Palmolive-Peet Co., Jersey City, N. J.
J. Eavenson & Sons, Del. and Penn Sts., Camden, N. J.
Hewitt Soap Co., Dayton, O.
Lanair Chem. Corp., 236 W. North Ave., Chicago
Lightfoot Schultz Co., 1412 Park Ave., Hoboken, N. J.
Los Angeles Soap Co., Los Angeles
Procter & Gamble Co., Cincinnati
Schmidt Soap Products Co., 236 W. North Ave., Chicago
John T. Stanley Co., 642 W. 30th St., N. Y.
Allen B. Wisley Co., 6801 W. 65th St., Chicago

SHEET SOAP (see Soap Paper)

SHIPPING CASES (see Boxes)

SHEEP DIPS (see Cattle Dips)

SHELLAC

Barrett Varnish Co., 1532 S. 50, Cicero, Ill.
Bradshaw Praeger & Co., 3248 W. 47th Place, Chicago
Wm. Diehl & Co., 336 W. 42nd St., N. Y. 18
Gillespie-Rogers-Pyatt Co., 80 John St., N. Y.
Haeuser Shellac Co., 52 Warren St., Brooklyn, N. Y.
George H. Lincks, 155 John St., N. Y.
Mac-Lac Co., Inc., 127 Maiden Lane, N. Y.
Mantrose Corp., 136 41st St., Brooklyn, N. Y.
Schwab Bros. Corp., 102 Maiden Lane, N. Y.
Twin City Shellac Co., 338 Flushing Ave., Brooklyn
Wm. Zinsser & Co., 516 W. 59th St., N. Y.

SHOE POLISH DAUBERS

Alba Cook Co., Jersey City, N. J.
American Cork Specialty Co., 115 Sutton St., Bklyn, N.Y.
Applicator Brush Co., 87 Frankfort St., N. Y.
Applicator Co., 1512 Atlantic Ave., Bklyn., N. Y.
Armstrong Cork Co., Lancaster, Pa.

SIFTER TOP CANS (see Cans, Sifter Top)

SIFTING EQUIPMENT (see Screens)

SILICA

American Colloid Co., 363 W. Superior St., Chicago
California Industrial Minerals Co., Friant, Calif.
Chas. B. Chrystal Co., 53 Park Pl., N. Y.

SILICA (Contd.)

Dicalite Co., 120 Wall St., N. Y.
 E. I. du Pont de Nemours Co., Wilmington, Del.
 Goris & Co., 8124 S. Hoyne Ave., Chicago
 K. F. Griffiths & Co., 110 E. 42nd St., N. Y.
 Hammill & Gillespie, 225 Broadway, N. Y.
 Harshaw Chem. Co., Cleveland
 Illinois Silica Co., Cairo, Ill.
 Innis, Speiden & Co., 117 Liberty St., N. Y.
 International Silica Co., Cairo, Ill.
 Johns-Manville Corp., 22 E. 40th St., N. Y.
 Pennsylvania Pulverizing Co., Lewistown, Pa.
 Jas. H. Rhodes & Co., 153 W. Austin Ave., Chicago
 L. A. Salomon & Bro., 216 Pearl St., N. Y.
 Silica Prods Co., 700 Baltimore Ave., Kansas City, Mo.
 A. E. Starkie, 5461 W. Division St., Chicago
 Tamm's Silica Co., 228 N. La Salle St., Chicago
 Chas. A. Wagner Co., 813 Callowhill St., Phila.
 Whittaker, Clark & Daniels, 260 W. Bway., N. Y.
 Witco Chemical Co., 295 Madison Ave., N. Y.

SILICATE OF SODA (see Sodium Silicate)

SILICO FLUORIDES (see Sodium Silicofluoride)

SLABBERS (see Soap Machinery)

SOAP BARK and EXTRACT (see Saponin)

SOAP BOOKS (see Soap Paper)

SOAP, CASTILE (See Castile Soap)

SOAP, CHIP (see Chip Soap)

SOAP COLORS (See Colors)

SOAP DIES

Anthony J. Fries & Son Co., 717 Sycamore St., Cincinnati
 Houchin Machinery Co., Hawthorne, N. J.
 Huber Machine Co., 259 46th St., Brooklyn, N. Y.
 R. A. Jones & Co., 315 E. 15th St., Cincinnati
 Jas. H. Matthews & Co., 3942 Forbes St., Pittsburgh
 I. Schwartz Engraving & Die Works, 38 W. 21st St., N. Y.

SOAP DISPENSERS (Liquid)

Ampion Corp., 4-89 47th Ave., L. I. City, N. Y.
 American Dispenser Co., 215 Fourth Ave., N. Y.
 Antiseptol Co., 5524 Northwest Highway, Chicago
 Bobrick Mfg. Corp., 1839 Blake Ave., Los Angeles 26
 Clifton Chemical Co., 62 William St., N. Y.
 Davies-Young Soap Co., Dayton, O.
 Eagle Soap Corp., Huntington, Ind.
 Fuld Bros., 702 S. Wolfe St., Baltimore
 Garnet Chem. Corp., 911 N. Lumber St., Allentown, Pa.
 L. E. Hicks & Son, 705 S. Grove Ave., Oak Park, Ill.
 R. M. Hollingshead Corp., Camden, N. J.
 Hysan Prods. Co., 932 W. 38th Place, Chicago
 Imperial Brass Mfg. Co., 1200 W. Harrison St., Chicago
 Moore Bros. Co., 100 Warren St., N. Y.
 Palmer Fixture Co., Waukesha, Wisc.
 Rochester Germicide Co., Rochester, N. Y.
 Uncle Sam Chemical Co., 573 W. 131st St., St., N. Y. C.
 U. S. Sanitary Specialties Corp., 435 S. Western Ave., Chicago
 G. H. Wood & Co., Toronto, Ont., Canada

SOAP DISPENSERS (Powder)

Ace Dispenser Co., 269 Genesee St., Buffalo, N. Y.
 Ampion Corp., 4-88 47th Ave., L. I. City, N. Y.
 American Dispenser Co., 215 Fourth Ave., N. Y.
 Bobrick Mfg. Corp., 1839 Blake Ave., Los Angeles 26
 Clifton Chemical Co., 62 William St., N. Y.
 Federal Tool Corp., 412 N. Leavitt St., Chicago
 Fuld Bros., 702 S. Wolfe St., Baltimore
 L. E. Hicks & Son, 705 S. Grove Ave., Oak Park, Ill.
 R. M. Hollingshead Corp., Camden, N. J.
 Hysan Prods. Co., 932 W. 38th Place, Chicago

When Production Schedules Are HEAVY Lehmann Machines DELIVER

The true worth of a machine can best be judged when it is called upon to function under peak production loads.

Under such conditions Lehmann Soap Machines demonstrate the value of careful engineering, superior materials and fine craftsmanship.



LEHMANN
SOAP
MILL



LEHMANN
SOAP
PLODDER

LEHMANN
 THE STANDARD FOR QUALITY
 IN MACHINERY

Why not let Lehmann master craftsmen recondition any of your machines that have lost efficiency through overlong use? We suggest you contact our Service Department.

J. M. LEHMANN COMPANY, INC.

MAIN OFFICE AND FACTORY, LYNDHURST, NEW JERSEY

MOORE Liquid Soap Dispensers

Featuring
Dependability of
Operation



No. 200—ATLAS
(Top Fill)

Top fill features positive flow control. Efficient in operation, beautiful streamline design.

Equipped with the unique efficient Moore metal-to-metal seated valve, attractive streamline design.



No. 425

No. 425 and 450 with either clear or opalescent globe.



No. 450
(Lather)

The push-in type with Moore metal-to-metal seated valve and Moore Patented Lather Plunger.

A rugged heavy duty machine. Uses the Moore metal-to-metal seated valve.



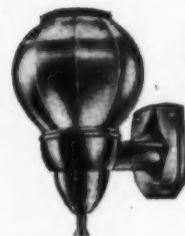
No. 500

Equipped with vacuum control spring action valve and working parts of brass. Metal chrome plated bracket.



No. 50—PEER
(Plastic)

Equipped with vacuum control spring action valve. All working parts are of brass. Plastic bracket.



No. 100—PEER
(Metal)



No. 300—TILT

Dispenses liquid soap. There are no mechanical parts to wear out. Adapted for heavy usage.

No. 350 TILT powder same as No. 300. Equipped with controlled powder dispensing nozzle.



No. 550—TANK
(Lather—40 oz.)

Delivers foamy lather from liquid soap. Valve has a whipping section.

**MOORE BROS.
COMPANY**

100 WARREN STREET, NEW YORK 7, N. Y

8491
U

Cash in

on SANITATION

on CONVENIENCE

on ECONOMY

with CLIFTON!

DISPENSERS



DUODEK



TILTYPE



MODERNE

... and a complete line of SANITATION PRODUCTS
LIQUID SOAPS and BASES — SHAMPOO SOAPS
OIL SOAP — HOSPITAL SOAPS, Soft and Liquid
DISINFECTANTS, Coal-Tar, Pine, Odorless
DEODORANT BLOCKS and CAKES—
VEGETABLE SOAP CLEANSERS
SYNTHETIC DETERGENTS

CLIFTON CHEMICAL CO.

62 William Street

New York

*Specialists in Sanitation Chemicals
for the jobber*



MODERNE



DUODEK



TILTYPE

Also valves, tanks and other models.
Beautiful imprint circulars

Ampion Dispensers Are Dependable

PRODUCTS

Liquid Soap Dispensers
Liquid Soaps & Bases
Oils, Soaps, & Liquids
Disinfectants
DDT Insecticides
Waxes & Polishes
Deodorizing Blocks
Containers
and Allied Products

Ampion Liquid Soap Dispensers give maximum service because they are correctly designed and have stood the test of time over a long period of years.

To sell MORE Liquid Soap furnish your trade with dependable Ampion Dispensers.

Our complete line of Sanitation Chemical Products will interest you.

AMPION CORPORATION
4-88 FORTY SEVENTH AVE.
LONG ISLAND CITY, N. Y.

SOAP DISPENSERS (Powder) (Contd.)

Imperial Brass Mfg. Co., 1200 W. Harrison St., Chicago
Moore Bros. Co., 100 Warren St., N. Y.
Packwood Mfg. Co., St. Louis
Palmer Fixture Co., Waukesha, Wisc.
Presto Mfg. Co., 770 Cromwell Ave., St. Paul, Minn.
Rochester Germicide Co., Rochester, N. Y.
Skotch Prods. Corp., 2710 Detroit Ave., Cleveland
E. B. Snyder Labs., 2137 E. Harold St., Philadelphia
Sugar Beet Prods. Co., Saginaw, Mich.
Uncle Sam Chemical Co., 573 W. 131st St., St., N. Y. C.
U. S. Sanitary Specialties Corp., 435 S. Western Ave., Chicago
G. H. Wood & Co., Toronto, Ont., Canada
Vasco Products Co., Elmira, N. Y.

SOAP DISPENSING SYSTEMS (Multi-unit with Tanks commonly termed "Gravity Feed Systems for Liquid Soaps")

Ampion Corp., 4-88 47th Ave., L. I. City, N. Y.
Antiseptol Co., 5524 Northwest Highway, Chicago
American Dispenser Co., 215 Fourth Ave., N. Y.
Bobrick Mfg. Corp., 1839 Blake Ave., Los Angeles, 26.
Clifton Chemical Co., 62 William St., N. Y.
Eagle Soap Corp., Huntington, Ind.
R. M. Hollingshead Corp., Camden, N. J.
Imperial Brass Mfg. Co., 1200 W. Harrison St., Chicago
Hysan Prods. Co., 932 W. 38th Place, Chicago
Moore Bros. Co., 100 Warren St., N. Y.
Palmer Fixture Co., Waukesha, Wisc.
Rochester Germicide Co., Rochester, N. Y.
U. S. Sanitary Specialties Corp., 435 S. Western Ave., Chicago
West Disinfecting Co., Long Island City, N. Y.
G. H. Wood & Co., Toronto, Ont., Canada

SOAP DRYERS (see Dryers)

SOAP, FLAKE (see Chip Soap)

SOAP FRAMES (see Frames)

SOAP KETTLES (see Kettles)

SOAP, LINSEED OIL (see Potash Soaps)

SOAP MACHINERY

Allied Steel & Equipment Co., 1007 Springfield Ave., Irvington, N. J.
Buhler Bros., Inc., 611 W. 43rd St., N. Y. C.
Houchin Machinery Co., Hawthorne, N. J.
Huber Machine Co., 259-46th St., Brooklyn
J. M. Lehmann Co., Lyndhurst, N. J.
Newman Tallow & Soap Machy. Co., 1051 W. 35th St., Chicago
H. K. Porter Co., 49th and Harrison Sts., Pittsburgh
Stein Equipment Co., 90 West St., N. Y. (Used)
Henry Simon, Ltd., Cheadle Heath, Stockport, England
Vickers-Armstrong, Ltd., Broadway, London, England

SOAP PAPER (Soap Sheets, Soap Pads, Soap Books—also Soap Cloth)

Charles F. Hubbs & Co., 383 Lafayette St., N. Y.
Moore Bros. Co., 100 Warren St., N. Y.
Rosefelt Sale Builders, 740 N. Plankinton Ave., Milwaukee, Wisc.
Velso Products Co., Ottumwa, Iowa

SOAP PERFUMES

Albert Albek, Inc., 511 S. Fairfax, Los Angeles
Allondon, Inc., 66 Dey St., N. Y.
American British Chemical Supplies, Inc., 180 Madison Ave., N. Y.
van Ameringen-Haebler, Inc., 315 Fourth Ave., N. Y.

LAUTIER FILS

ESSENTIAL OILS

CONCENTRATED NATURAL FIXATIVES

SYNTHETIC AROMATICS

L. F. CLAIRS

BENZOIN

ESSENTIAL OILS

BERGAMOT
BOIS DE ROSE
CANANGA

GALBANUM
LABDANUM
PERU

GERANIUM
LAVENDER
LAVENDER SPIKE
OAK MOSS
ORIGANUM

STYRAX
TONKA
TOLU

PETITGRAIN
ROSEMARY
SANDALWOOD
YLANG YLANG
VETIVERT

Concentrated Perfume Bases for all types of Soaps

LAUTIER FILS, Inc.

321 FIFTH AVENUE

NEW YORK 16, N. Y.

GRASSE

PARIS

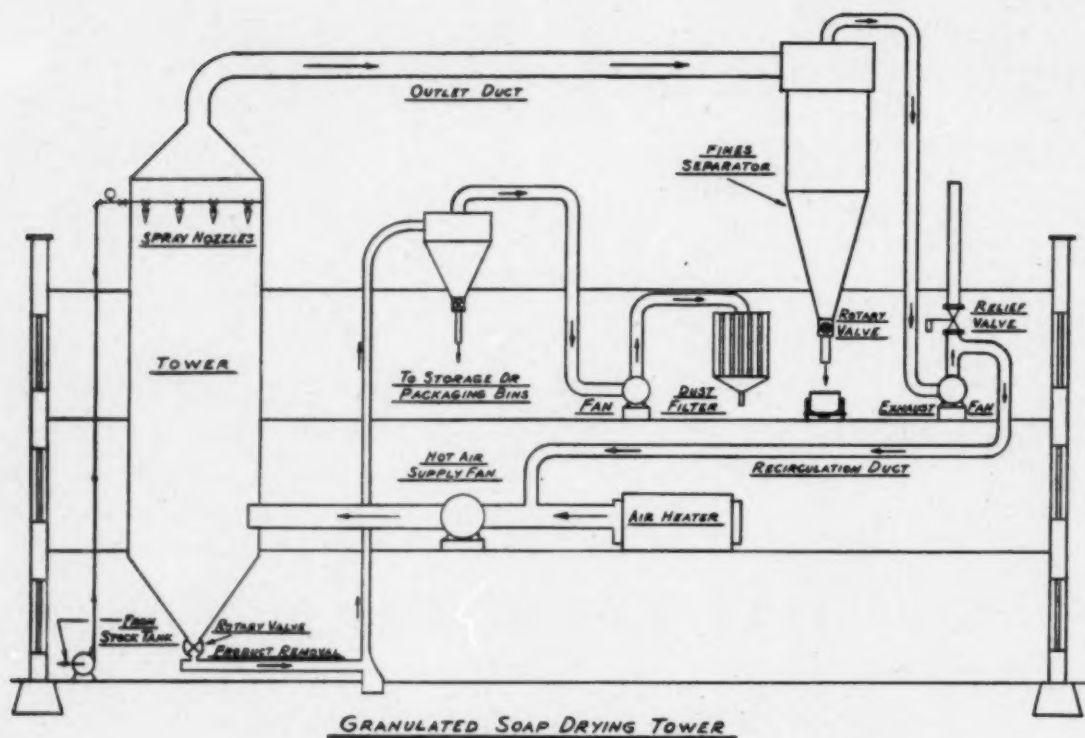
LONDON

BEYROUTH

MANUFACTURERS OF QUALITY RAW MATERIALS FOR OVER 100 YEARS

ALAN PORTER LEE, INC.

Engineers



DESIGN AND CONSTRUCTION OF COMPLETE PLANTS
FOR TOILET SOAP AND LAUNDRY SOAP PRODUCTION,
GRANULATED SOAP AND WASHING POWDER SYSTEMS,
FAT HYDROLYSIS, FATTY ACID DISTILLATION PLANTS,
GLYCERINE TREATING, EVAPORATION EQUIPMENT.

ALAN PORTER LEE, INC.

150 Broadway

Cables — ALPORTLE

New York 7, U. S. A.

Telephone — REctor 2-3293

Always Available At Newman's

A COMPLETE LINE OF EQUIPMENT

For Soap and Sanitary Products



This Newman brand new all steel steam-jacketed soap crutcher will crutch any kind of soap. We also build another crutcher especially adapted for laundry soap.



Jones Automatic Soap Press.

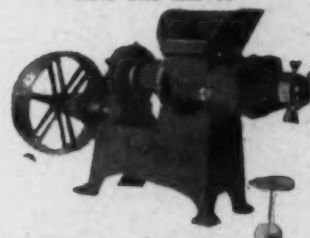
One of the regular features of our 48 years experience is the complete stock from which manufacturers may choose their requirements. You can always buy with confidence from NEWMAN whether your purchases be among the new crutchers, cutting tables and frames which we manufacture—or the complete line of rebuilt equipment which we offer. Our guarantee of customer satisfaction is made possible by the fact that all used equipment is rebuilt in our plant. No matter how large or small your requirements, we can supply you.

USED SPECIALS

H-A, 1500, 3000, 4000, 5000 lbs. capacity. Steam Jacketed Crutchers.
Dopp Steam Jacketed Crutchers, 1000, 1200, 1500 lbs. and 800 gals. capacity.
Ralston Automatic Soap Presses.
Scouring Soap Presses.
Empire State, Dopp & Crosby Foot Presses.
2, 3, 4, 5 and 6 roll Granite Toilet Soap Mills.
H-A 4 and 5 roll Steel Mills.
H-A Automatic and Hand-Power slabbers.
Preactor & Schwartz Bar Soap Dryers.
Blanchard No. 10-A and No. 14 Soap Powder Mills.
J. H. Day Jaw Soap Crusher.
H-A, 6, 8 and 10 inch Single Screw Plodders.
Allbright-Neil 10 inch Plodders.
Filling and Weighing Machines for Flakes, Powders, etc.
Wood and Steel Soap Frames, all sizes.
Steam Jacketed Soap Remelters.
Automatic Soap Wrapping Machines.
Glycerin Evaporators, Pumps.
Sperry Cast Iron Square Filter Presses, 10, 12, 18, 24, 30 and 36 inch.
Perrin 18 inch Filter Press with Jacketed Plates.
Gedge-Gray Mixers, 25 to 6000 lbs. capacity, with and without sifter Tops.
Day Grinding and Sifting Machinery.
Schultz-O'Neill Mills.
Day Pony Mixers.
Gardiner Sifter and Mixer.
Preactor & Schwartz large roll Soap Chip Dryers complete.
Doll Steam Jacketed Soap Crutchers, 1000, 1200 and 1350 lbs. capacity.
Day Talcum Powder Mixers.
All types and sizes—Tanks and Kettles.
Ralston and H-A Automatic Cutting Tables.
Soap Dies for Foot and Automatic Presses.
Broughton Soap Powder Mixers.
Williams Crusher and Pulverizer.
National Filling and Weighing Machines.



*SOAP POWDER MILLS
Sizes 10A and 14*



*Single screw soap plodders with
6, 8, 10 or 12 inch screws.
All completely rebuilt and un-
conditionally guaranteed*



Automatic Power Soap Cutting Tables.

AN INVITATION

We extend a cordial invitation for manufacturers to come in and examine our stock. If you are not on our mailing list, write today so you will receive information regarding special bargains.

Newman Tallow & Soap Machinery Co.

INCORPORATED

Telephone Yards 3665-3666

1051 WEST 35th STREET, CHICAGO 9, ILL.

Our Forty Years of Soap Experience Can Help Solve Your Soap Problems

No matter what your price
or production requirements

LOOK TO MM&R
for **TOP VALUE** and
PROVEN PERFORMANCE

FOR NEUTRALIZING & PERFUMING
MM&R Neutralizers

Complete listing for every product
and purpose. Tremendous covering
power, lasting effectiveness, excep-
tional economy distinguish all neutral-
izers by MM&R.

MM&R Perfume Oils

Delightful fragrances for soaps, liquid
soaps, para blocks, floor polishes. No
matter how inexpensive the product,
MM&R can economically "odo-style"
it for greater sales-appeal.

EXCLUSIVELY FORMULATED
FOR USE IN FLY SPRAYS
MM&R Deodor-scents

Even the most persistent basic-
ingredient odors are neutralized
effectively and lastingly with MM&R
DEODOR-SCENTS. Two types: for
imparting a delightful fragrance as
well as deodorizing, and for neu-
tralizing efficiently without perfum-
ing. For a Deodor-Scented sample
of your spray, send unperfumed
product and indication of perfum-
ing budget to MM&R.

If your problem is how little you can
spend for perfuming or deodorizing,
MM&R CAN BE OF SERVICE TO YOU

BASIC MATERIALS OF TESTED QUALITY
**MM&R Essential Oils
and Related Products**

Gathered from every corner of the
world, MM&R Essential Oils in turn
enjoy a world-wide reputation for
unsurpassed quality. Experienced
selection and numerous control
checks assure uniform quality in
every bottle labeled MM&R. Also
supplied — a complete line of...

BALSAMS • AROMATIC CHEMICALS
OLEORESINS • CERTIFIED COLORS
FLAVORING MATERIALS



Send for further information and Complete Catalog

IF IT'S LABELED MM&R...IT'S THE CHOICE OF EXACTING USERS THE WORLD OVER



MAGNUS, MABEE & REYNARD, INC.

SINCE 1895... ONE OF THE WORLD'S GREATEST SUPPLIERS OF ESSENTIAL OILS
19 DEARBORN STREET, NEW YORK 13, N.Y. • 221 NORTH LA SALLE STREET, CHICAGO 4, ILL.

SAN FRANCISCO: BRAUN-KNECHT-HEIMANN-CO. • LOS ANGELES: BRAUN CORP. • SEATTLE, PORTLAND, SPOKANE: VAN WATERS & ROGERS, INC.



184791

SOAP PERFUMES (Contd.)

Aromatic Products, Inc., 15 E. 30th St., N. Y.
 Bush Aromatics, Inc., 136 Liberty St., New York
 Centflor Mfg. Co., 450 W. 31st St., N. Y.
 Ph. Chaleyer, Inc., 160 E. 56th St., N. Y.
 Antoine Chris Co., Inc., 119 W. 57th St., N. Y.
 Compagnie Duval, Division of S. B. Penick & Co., 50 Church St., N. Y.
 Compagnie Parento, Croton-on-Hudson, N. Y.
 Dodge & Olcott, Inc., 180 Varick St., N. Y.
 P. R. Dreyer, Inc., 119 W. 19th St., N. Y.
 E. I. du Pont de Nemours & Co., Wilmington, Del.
 Felton Chemical Co., 603 Johnston Ave., Brooklyn
 Firmenich & Co., 250 W. 18th St., N. Y.
 Fleuroma, Inc., 73 Sullivan St., N. Y.
 Florasynth Labs., 1513 Olmstead Ave., Bronx, N. Y.
 Benj. French, Inc., 160 5th Ave., N. Y.
 Fritzsche Bros., Inc., 76 Ninth Ave., N. Y.
 General Drug Co., 644 Pacific St., Brooklyn
 Givaudan-Delawanna, Inc., 330 W. 42nd St., N. Y.
 Gunning & Gunning, 601 W. 26th St., N. Y.
 D. W. Hutchinson & Co., 162 Front St., N. Y.
 Lautier Fils, 321 Fifth Ave., N. Y.
 Geo. Lueders & Co., 427 Washington St., N. Y.
 Magnus, Maboe & Reynard, 16 Desbrosses St., N. Y.
 Naugatuck Aromatics, 254 Fourth Ave., N. Y.
 Neumann-Buslee & Wolfe, 224 W. Huron St., Chicago
 New York Aromatics Co., 5 Beekman St., N. Y.
 Norda Essential Oil & Chem. Co., 601 W. 16th St., N. Y.
 Noville Essential Oil Co., 157 Cedar St., N. Y.
 Orbis Products Corp., 215 Pearl St., N. Y.
 Perry Bros., Inc., 220 Flushing Ave., Brooklyn
 Polak & Schwartz, Inc., 667 Washington St., N. Y.
 Polak's Frutal Works, 36-14 35th St., L. I. City, N. Y.
 Edw. Remus & Co., 11 W. 42nd St., N. Y.
 Henri Robert, Inc., 39 W. 60th St., N. Y.
 Roure-Dupont, Inc., 366 Madison Ave., N. Y.
 Schimmel & Co., 601 W. 26th St., N. Y.
 Edwin Seebach Co., 912 Broadway, N. Y.
 Seeley & Co., 136 Liberty St., N. Y.
 Sparhawk Co., Sparkill, N. Y.
 Synfleur Scientific Labs., Monticello, N. Y.
 Syntomatic Corp., 114 E. 32nd St., N. Y.
 Tombarel Prods. Corp., 12 E. 22nd St., N. Y.
 Ungerer & Co., 161 Sixth Ave., N. Y.
 Van Dyk & Co., Belleville, N. J.
 Albert Verley, Inc., 440 W. Superior St., Chicago

SOAP PLANTS (Engineering)

Alan Porter Lee, 150 Broadway, N. Y.
 Wurster & Sanger, 5201 S. Kenwood Ave., Chicago

SOAP POWDER MILLS

Abbe Engineering Co., 50 Church St., N. Y.
 Consolidated Products Co., 15 Park Row, N. Y. (Used)
 First Machy. Corp., 157 Hudson St., N. Y. (Used)
 Houchin Machinery Co., Hawthorne, N. J.
 Huber Machine Co., 359 46th St., Brooklyn, N. Y.
 J. M. Lehmann Co., Lyndhurst, N. J.
 Newman Tallow & Soap Mach. Co., 1051 W. 35th, Chicago (Used)
 Prater Pulverizing Co., 1825 55th Ave., Chicago
 Henry Simon, Ltd., Cheadle Heath, Stockport, Eng.
 Stein Equipment Co., 90 West St., N. Y. (Used)
 Vickers-Armstrong, Ltd., Broadway, London, England

SOAP, POWDERED (White neutral powdered soap, powdered castile soap, etc., 95-99 per cent anhydrous soap. Do not confuse with Soap Powders.)

Armour Soap Wks., 1355 W. 31st St., Chicago
 Arrow Laboratories, 236 W. North Ave., Chicago
 Chem. Mfg. & Dist. Co., Jersey City, N. J.
 Colgate-Palmolive-Peet Co., Jersey City, N. J.
 Conti Products Corp., 155 Varick St., N. Y.
 Eagle Soap Corp., Huntington, Ind.
 J. Eavenson & Sons, Camden, N. J.
 Enjay Co., 15 W. 51st St., N. Y.
 L. E. Hicks & Son, 507 S. Grove Ave., Oak Park, Ill.

J. L. Hopkins & Co., 220 Broadway, N. Y.
 Imperial Prods. Co., 1600 Fountain St., Phila.
 Insto Co., 110 Center St., Los Angeles
 Kranich Soap Co., 60 Richards St., Brooklyn, N. Y.
 Lanair Chem. Corp., 236 W. North Ave., Chicago
 Lightfoot Schultz Co., 1412 Park Ave., Hoboken, N. J.
 Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
 S. B. Penick & Co., 50 Church St., N. Y.
 John Powell & Co., 1 Park Ave., N. Y.
 R. J. Prentiss & Co., 110 William St., N. Y.
 Schmidt Soap Products Co., 236 W. North Ave., Chicago
 Texas Soap Mfg. Corp., 4905 Calhoun Rd., Houston
 Warren Soap Mfg. Co., 51 Waverly St., Cambridge, Mass.
 G. H. Wood & Co., Toronto, Ont., Canada
 Allen B. Wisley Co., 6801 W. 56th St., Chicago

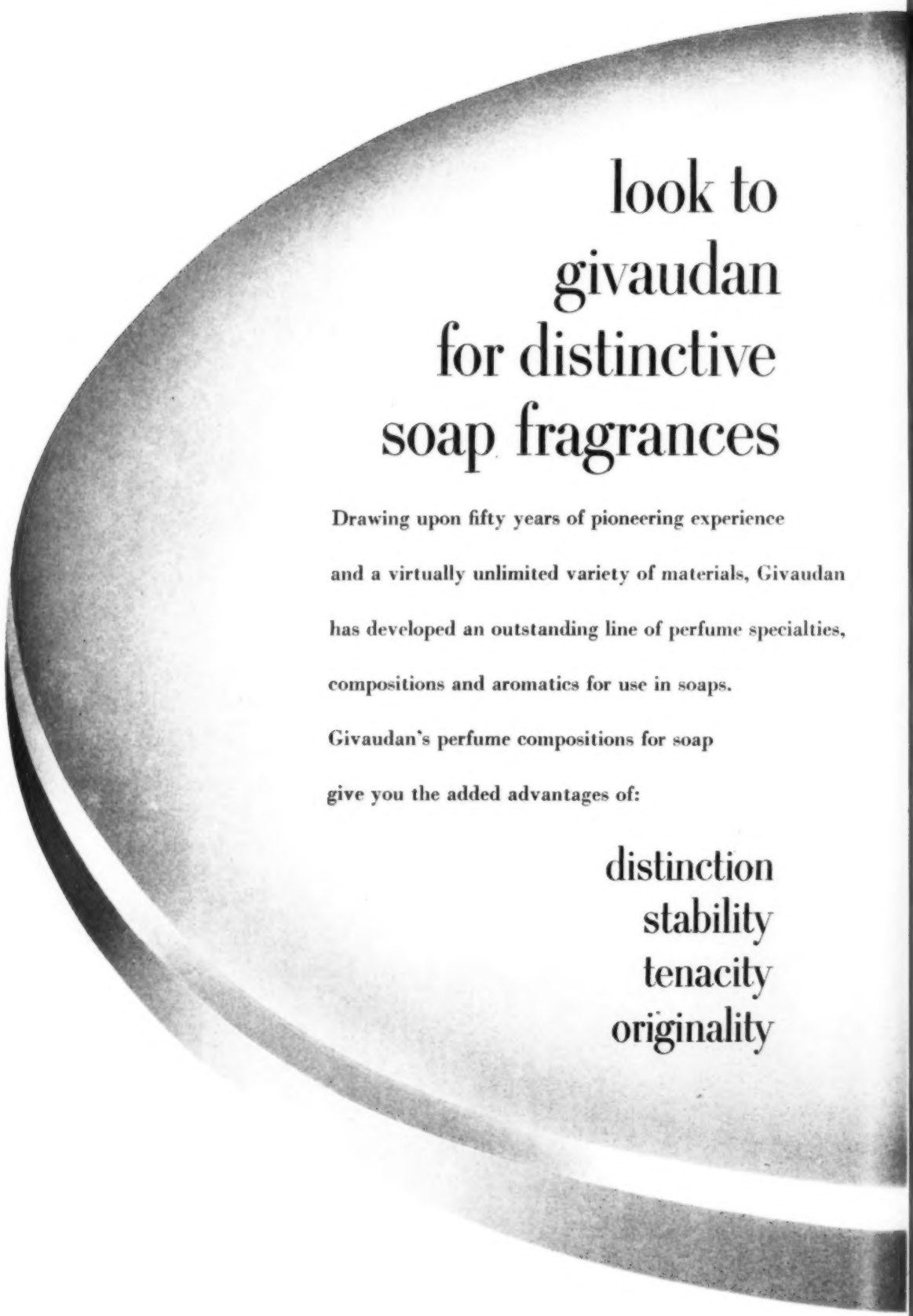
SOAP POWDERS

(Do not confuse with pure powdered soaps)

Aid Soap Mfg. Co., 1962 Enoch St., Pittsburgh, Pa.
 American Soap Powder Wks., Inc., 98 Van Dyk St., Brooklyn
 American Soap & Washoline Co., Cohoes, N. Y.
 Armour Soap Wks., 1355 W. 31st St., Chicago
 Baums Castorine Co., 200 Mathew St., Rome, N. Y.
 Beach Soap Co., Lawrence, Mass.
 Cowles Detergent Co., 7016 Euclid Ave., Cleveland
 Chemical Mfg. & Dist. Co., Easton, Pa.
 Cudahy Packing Co., 221 N. La Salle St., Chicago
 Du Bois Soap Co., Cincinnati
 East Coast Soap Corp., 98-106 Van Dyke St., Bklyn. 31
 J. Eavenson & Sons, Camden, N. J.
 Essential Chemicals, 744 N. 4th St., Milwaukee
 Gaylord Chem. Co., 701 Woodsworth Rd., Kansas City, Mo.
 Hercules Powder Co., Wilmington, Del.
 Hewitt Soap Co., Dayton, O.
 Hockwald Chemical Co., 135 Mississippi St., San Francisco
 R. M. Hollingshead Corp., Camden, N. J.
 Kamen Soap Prods. Co., Woolworth Bldg., N. Y.
 J. F. Kerns Chem. Prods., 2239 S. Michigan Ave., Chicago
 Klix Chem. Co., 2460 Third St., San Francisco
 H. Kohnstamm & Co., 91 Park Pl., N. Y.
 Los Angeles Soap Co., 617 E. First St., Los Angeles
 MacKenzie Labs., Front & Yarnall Sts., Chester, Pa.
 Geo. E. Marsh Co., 200 Broadway, Cambridge, Mass.
 Miranol Chem. Co., 16 Melville Pl., Irvington, N. J.
 Napthole, Inc., 15 E. 26th St., N. Y.
 National Milling & Chem. Co., Manayunk, Phila.
 North Coast Soap & Chem. Wks., Seattle, Wash.
 Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
 Phipps Products Co., 30 Huntington Ave., Boston
 Port Huron Detergent Co., Port Huron, Mich.
 Procter & Gamble Co., Cincinnati
 Theo. B. Robertson Prods. Co., 700 W. Division St., Chicago
 Sanitary Soap Co., 104 Railroad Ave., Paterson, N. J.
 S. & S. Soap Co., 324 Barretto St., Bronx, N. Y.
 Seaboard Distributors, 60 Park Pl., Newark, N. J.
 Skotch Prods. Corp., 2710 Detroit Ave., Cleveland
 Stevens Soap Corp., 200 Sullivan St., Brooklyn
 John T. Stanley Co., 642 W. 30th St., N. Y.
 Swift & Co., Union Stock Yards, Chicago
 Texas Soap Mfg. Corp., 4905 Calhoun Rd., Houston
 Vasco Prods. Co., Elmira, N. Y.
 Vliet Soap Co., 638 Monroe St., Brooklyn
 Warren Soap Mfg. Co., 51 Waverly St., Cambridge Mass.
 M. Werk Co., St. Bernard, Cincinnati
 Western Chem. & Mfg. Co.,
 4032 S. Wentworth Ave., Chicago
 G. H. Wood & Co., Toronto, Ont., Canada
 Chas. W. Young & Co., Phila.

SOAP PRESSES (see Presses)

SOAP SHEETS (see Soap Paper)



look to givaudan for distinctive soap fragrances

Drawing upon fifty years of pioneering experience
and a virtually unlimited variety of materials, Givaudan
has developed an outstanding line of perfume specialties,
compositions and aromatics for use in soaps.

Givaudan's perfume compositions for soap
give you the added advantages of:

distinction
stability
tenacity
originality

synthetic aromatics

are today indispensable for soap perfumery. As a leader in this field, Givaudan has set the standard of quality through constant and tireless research, the development of control processes that assure chemical purity, and the application of advanced olfactory knowledge and skill.

Following are but a few of the hundreds of aromatic chemicals manufactured by Givaudan for the perfuming of soap:

AMYL SALICYLATE AUBEPINE
BENZYL ACETATE CINNAMIC ALCOHOL CYCLAMEN ALDEHYDE
GERANIOL HELIOTROPIN INDOL IRISONES (IONONES)
LAURINE (HYDROXYCITRONELLAL) LINALOOL
LINALYL ACETATE MUSKS (SYNTHETIC)
PHENYL ETHYL ALCOHOL RALDEINES (METHYL IONONES)
TERPINEOL TERPINYL ACETATE

"Traditionally . . . Progressively . . . Dependably Givaudan"

Givaudan-Delawanna, Inc.

330 West 42nd Street, New York 18, N. Y.

Branches: Philadelphia • Los Angeles • Cincinnati • Boston
Detroit • Chicago • Seattle • Montreal • Toronto

COLUMBIA *Chemicals*

... for soap making • special mixtures • repacking

Caustic Soda

Liquid	50% and 73% NaOH
Solid	76% Na ₂ O
Flake	76% Na ₂ O, Fine and Medium
Ground and Powdered	76% Na ₂ O

Columbia Caustic Soda is especially desirable for the manufacture of soap because of its freedom from impurities and metallic contamination. Liquid grades are shipped in special tank cars which first made practical the shipment of 73% Caustic Liquor in its purest form. Insulation effectively prevents crystallization and the patented lining prevents metallic contamination in transit.

Other grades test 98-100% Sodium Hydroxide (NaOH), equivalent to 76% Na₂O. Flake Caustic Soda is prepared in two grades of fine and medium sized flakes, free of dust. The finer grade is especially suitable for repacking for household use, as are the Ground and Powdered grades.

Soda Ash—Light and Dense

The original Columbia chemical. Nearly a half-century's experience in the manufacture of this essential chemical for soap makers has enabled the development of techniques and controls that assure uniform density and regularity of physical form and purity.

Special Cleansers

COLUMBIA CLEANER AND CLEANSER is a specially prepared product for general use in all hand cleaning operations. A white powder containing no harmful inactive ingredients, it dissolves rapidly and completely in water. COLUMBIA PHOSFLAKE is a uniform blend of Caustic Soda and Tri Sodium Phosphate, prepared in convenient flake form. Especially adapted to machine bottle washing—quick acting, easy to handle (no dust particles to irritate the skin and throat of the operator), superior in sterilizing and rinsing properties.

Modified Sodas

Mixtures of Sodium Carbonate and Sodium Bicarbonate. Especially useful in cleansing operations requiring a mild alkaline detergent-aid. Manufactured in three grades—No. 100, No. 200 and No. 300—with different degrees of alkalinity.

COLUMBIA TECHNICAL SERVICE

Columbia's Technical Service is available for developing the most advantageous uses of these or other Columbia products in your processes.

COLUMBIA  CHEMICALS

Pittsburgh Plate Glass Company, Columbia Chemical Division, Fifth at Bellefield, Pittsburgh 13, Pa. . . . Chicago • Boston • St. Louis • Pittsburgh • New York
Cincinnati • Cleveland • Minneapolis • Philadelphia • Charlotte • San Francisco



PAINT • GLASS • CHEMICALS • BRUSHES • PLASTICS

PITTSBURGH PLATE GLASS COMPANY

SOAP SOLUTIONIZING DEVICE (Solutionizing and dispensing drums for soft soaps)

Clifton Chemical Co., 247 Front St., N. Y.
Davies-Young Soap Co., Dayton, O.
Rudolph Guth, Inc., 9604 Meech Ave., Cleveland, Ohio
Independent Specialties, 152 W. 75th St., Chicago

SOAP SLABBERS (see Soap Machinery)

SOAP STOCK (Boiled down cotton oil soap stock, etc.)

(see also Brokers and Dealers)

Armour & Co., 1355 W. 31st St., Chicago
Brode Corp., Memphis, Tenn.
T. G. Cooper & Co., Cedar and Venango Sts., Phila.
Durkee Famous Foods, Inc., 2670 Elston Ave., Chicago
Wm. H. Floyd & Co., Los Angeles
H. Hentz & Co., 60 Beaver St., N. Y.
Portsmouth Cotton Oil Refining Co., Portsmouth, Va.
Procter & Gamble Co., Cincinnati, O.
Southern Cotton Oil Co., 21 West St., N. Y.
A. E. Staley Mfg. Co., Decatur, Ill.
Welch, Holme & Clark Co., 439 West St., N. Y.

SOAP VALVES (see Soap Dispensing Systems)

SOAP, WHALE OIL (see Whale Oil Soap)

SOAP WRAPPING MACHY. (see Wrapping Mach.)

SOAPLESS DETERGENTS (see Detergents, Synthetic)

SOAPLESS SHAMPOOS (see Shampoos Soapless)

SOAPS, AUTO (see Potash Soaps)

SOAPS, FLOATING (see Floating Soaps)

SOAPS, GRANULATED (see Laundry Soaps, Granulated)

SOAPS, LIQUID (see Potash Soaps)

SOAPS, MEDICINAL, CAKE (see Medicinal Soaps, Cake)

SOAPS, MOTTLED (see Mottled Soaps)

SOAPS, PINE SCRUB (see Pine Scrub Soaps)

SOAPS, SCOURING (see Scouring Soaps)

SOAPS, SCRUBBING (see Floor Scrub Soaps)

SOAPS, SURGICAL (see Potash Soaps)

SOAPS, TEXTILE (see Textile Soaps)

SODA ASH

(see also Dealers)

American Cyanamid & Chemical Corp., 30 Rockefeller Plaza, N. Y.
Diamond Alkali Co., 535 Smithfield St., Pittsburgh
Dow Chemical Co., Midland, Mich.
E. I. du Pont de Nemours Co., Wilmington, Del.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Mathieson Chemical Co., 60 E. 42nd St., N. Y.
Niagara Alkali Co., 60 E. 42nd St., N. Y.
Penn Salt Mfg. Co., Widener Bldg., Phila.
Philipp Bros., 70 Pine St., N. Y.
Pittsburgh Plate Glass Co., Columbia Chemical Div., Grant Bldg., Pittsburgh

Chas. L. Read & Co., 120 Greenwich St., N. Y.
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Solvay Sales Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Jos. Turner & Co., Ridgefield, N. J.
Welch, Holme & Clark Co., 439 West St., N. Y.
Westvaco Chlorine Prods. Co., 405 Lexington Ave., N. Y.
Wyandotte Chem. Corp., Wyandotte, Mich.

SODA (Modified)

(see also Dealers)

American Cyanamid & Chemicals Corp., 30 Rockefeller Plaza, N. Y.
Diamond Alkali Co., 535 Smithfield St., Pittsburgh
E. I. du Pont de Nemours Co., Wilmington, Del.
Los Angeles Soap Co., 617 E. First St., Los Angeles
Mathieson Chemical Co., 60 E. 42nd St., N. Y.
Pittsburgh Plate Glass Co., Columbia Chem. Div., Grant Bldg., Pittsburgh
Rosenthal Bercow Co., 25 E. 26th St., N. Y.
Solvay Sales Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Stauffer Chem. Co., 420 Lexington Ave., N. Y.
Jos. Turner & Co., Ridgefield, N. J.
Welch, Holme & Clark Co., 439 West St., N. Y.
Wyandotte Chem. Corp., Wyandotte, Mich.

SODIUM ACID SULFATE (see Nitre Cake)

SODIUM ALGINATE

Algin Corp. of America, 24 State St., N. Y.
Kelco Co., 31 Nassau St., N. Y.

SODIUM ARSENITE

Chipman Chem. Co., Bound Brook, N. J.
Geigy Co., 89 Barclay St., New York
Merck & Co., Rahway, N. J.
Penn Salt Mfg. Co., Widener Bldg., Phila.
Shepherd Chem. Co., Cincinnati 12, O.
Stauffer Chem. Co., 420 Lexington Ave., N. Y.

SODIUM BENZOATE

J. T. Baker Chem. Co., Phillipsburg, N. J.
Dow Chem. Co., Midland, Mich.
E. I. du Pont de Nemours & Co., Wilmington, Del.
Heyden Chem. Corp., 393 7th Ave., N. Y.
Hooker Electrochem. Co., Niagara Falls, N. Y.
Merck & Co., Rahway, N. J.
Monsanto Chemical Co., 1700 S. 2nd St., St. Louis
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Seydel Chem. Co., 225 Mercer St., Jersey City, N. J.

SODIUM BICARBONATE

(see also Dealers)

American Cyanamid & Chemical Corp., 30 Rockefeller Plaza, N. Y.
Church & Dwight Co., 70 Pine St., N. Y.
Diamond Alkali Co., 535 Smithfield St., Pittsburgh
E. I. du Pont de Nemours Co., Wilmington, Del.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Mathieson Chemical Co., 60 E. 42nd St., N. Y.
Monsanto Chem. Co., 1800 S. 2nd St., St. Louis
Pennsylvania Salt Mfg. Co., Widener Bldg., Philadelphia
Pittsburgh Plate Glass Co., Columbia Chemical Div., Grant Bldg., Pittsburgh
Rosenthal Bercow Co., 25 E. 26th St., N. Y.
Solvay Sales Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Jos. Turner & Co., Ridgefield, N. J.
Welch, Holme & Clark Co., 439 West St., N. Y.
Wyandotte Chem. Corp., Wyandotte, Mich.



SODIUM TRIPOLYPHOSPHATE

An efficient and economical complex phosphate for calcium sequestration. Low alkalinity. Non-caking. Compatible with crystalline products in dry mixtures.

CAUSTIC SODA

Liquid 50% — Regular and Rayon Grades. Liquid 70-73%. Flake and Solid, 76% Na_2O .

CAUSTIC POTASH

Liquid 45-49%. Flake and Solid 88-92%. A particularly uniform product, made to traditional Westvaco standards, consistently low in iron, chlorides and carbonates.

● **PHOSPHATES** (Acid Sodium Pyrophosphate, Disodium Phosphate, Monosodium Phosphate, Tetrapotassium Pyrophosphate, Tetrasodium Pyrophosphate, Tripotassium Phosphate, Dry Mixtures containing phosphates, alkalis detergents, etc., formulated to order.)

● **INSECTICIDES and FUMIGANTS** (Benzene Hexachloride, Technical, Dry and Wettable Dusts; DDT, Technical, Dry and Wettable Dusts; Methyl Bromide. Other Agricultural Chemicals.)

● **SOLVENTS** (Carbon Bisulfide, Carbon Tetrachloride, Ethylene Dibromide, Sulfur Monochloride, Trichlorethylene.)

BARIUM CHEMICALS • MAGNESIUM CHEMICALS • SPECIALTY CHEMICALS

Complete Westvaco Products List Sent on Request

Your inquiry on the current availability and price of any Westvaco Chemical will have prompt and courteous attention.

WESTVACO CHLORINE PRODUCTS CORPORATION

405 LEXINGTON AVENUE • NEW YORK 17, N.Y. • MU 9-4920

141 W. JACKSON BLVD. CHICAGO 4, ILL. • 3540 CROTON AVE. CLEVELAND 15, OHIO • NEWARK, CALIFORNIA • 1900 E. JEFFERSON ST. DETROIT 7, MICHIGAN • 9TH & MAIN STS. CINCINNATI 2, OHIO • 9TH & GRATIOT STS. ST. LOUIS 1, MISSOURI • 6TH & MAIN STS. LOS ANGELES, CALIFORNIA

SODIUM BICHROMATE

(see also Dealers)

American Cyanamid & Chemical Corp., 30 Rockefeller Plaza, N. Y.
Diamond Alkali Co., 535 Smithfield St., Pittsburgh
E. I. du Pont de Nemours Co., Wilmington, Del.
General Chem. Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Merck & Co., Rahway, N. J.
Mutual Chemical Co., 270 Madison Ave., N. Y.
Natural Products Refining Co., 900 Garfield Ave., Jersey City, N. J.
Prior Chem. Corp., 420 Lexington Ave., N. Y.
Rosenthal Bercow Co., 25 E. 26th St., N. Y.
Jos. Turner & Co., Ridgefield, N. J.

SODIUM BISULFATE (see Nitre Cake)

SODIUM CARBONATE (see Soda Ash)

SODIUM CHLORATE

J. T. Baker Chem. Co., Phillipsburg, N. J.
Chipman Chem. Co., Bound Brook, N. J.
E. I. du Pont de Nemours & Co., Wilmington
Merck & Co., Rahway, N. J.
Oldbury Electrochem. Co., 22 E. 40th St., N. Y.
Penn Salt Mfg. Co., Widener Bldg., Phila.
Sergeant Chem. Co., 7 Dey St., N. Y.
Western Electrochem. Co., Los Angeles 23, Calif.

SODIUM CHLORIDE (see Salt, Common Salt)

SODIUM CYANIDE

American Cyanamid & Chem. Corp., 30 Rockefeller Plaza, N. Y.
E. I. du Pont de Nemours Co., Wilmington, Del.
General Chem. Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Merck & Co., Rahway, N. J.
Rosenthal Bercow Co., 25 E. 26th St., N. Y.
Jos. Turner & Co., Ridgefield, N. J.

SODIUM FLUORIDE (see Fluorides)

SODIUM FLUOSILICATE (see Sodium Silicofluoride)

SODIUM HYDROSULFITE

American Cyanamid & Chem. Corp., 30 Rockefeller Plaza, N. Y.
J. T. Baker Chem. Co., Phillipsburg, N. J.
E. I. du Pont de Nemours Co., Wilmington, Del.
General Chem. Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
General Dyestuffs Corp., 435 Hudson St., N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Merck & Co., Rahway, N. J.
Rohm & Haas Co., Inc., 222 W. Washington Sq., Phila.
Rosenthal Bercow Co., 25 E. 26th St., N. Y.
Royce Chemical Co., Carlton Hill, N. J.

SODIUM HYPOCHLORITE (see Laundry Bleach)

SODIUM HYPOSULFITE (Thiosulfate)

E. I. du Pont de Nemours Co., Wilmington, Del.
General Chem. Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
A. R. Maas Chem. Co., South Gate, Calif.
Mallinckrodt Chem. Wks., St. Louis
Merck & Co., Rahway, N. J.
Rohm & Haas, 222 W. Washington Sq., Phila.
Rosenthal Bercow Co., 25 E. 26th St., N. Y.
Virginia Smelting Co., W. Norfolk, Va.

SODIUM LAURYL SULFATE (see Sulfonated Fatty Alcohols)

SODIUM METASILICATE

Cowles Detergent Co., 7016 Euclid Ave., Cleveland
Diamond Alkali Co., Standard Silicate Div., 535 Smithfield St., Pittsburgh
E. I. du Pont de Nemours Co., Wilmington, Del.
Emeryville Chem. Co., 405 Montgomery St., San Francisco
General Chemical Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
MacKenzie Laboratories, Front & Yarnall Sts., Chester, Pa.
Philadelphia Quartz Co., 125 S. 3rd St., Phila., Pa.
Welch, Holme & Clark Co., 439 West St., New York

SODIUM METAPHOSPHATE

Blockson Chem. Co., Joliet, Ill.
General Chem. Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Griffin Chemical Co., 1000 16th St., San Francisco
MacKenzie Labs., Front & Yarnall Sts., Chester, Pa.
Mechling Bros. Chemical Co., Camden, N. J.
Monsanto Chemical Co., 1700 S. 2nd St., St. Louis
Welch, Holme & Clark Co., 439 West St., N. Y.

SODIUM ORTHOSILICATE

Cowles Detergent Co., 7016 Euclid Ave., Cleveland
Diamond Alkali Co., Standard Silicate Div., 535 Smithfield St., Pittsburgh
Dow Chemical Co., Midland, Mich.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Pennsylvania Salt Mfg. Co., 1000 Widener Bldg., Phila.

SODIUM PERBORATE

(see also Dealers)

American Cyanamid & Chem. Corp., 30 Rockefeller Plaza, N. Y.
Croton Chem. Corp., 114 Liberty St., N. Y.
E. I. du Pont de Nemours Co., Wilmington, Del.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Merck & Co., Rahway, N. J.

SODIUM PYROPHOSPHATE (see Tetra Sodium Pyrophosphate)

SODIUM SESQUICARBONATE

Diamond Alkali Co., 535 Smithfield St., Pittsburgh
Mathieson Alkali Wks., 60 E. 42nd St., N. Y.
Mechling Bros. Chemical Co., Camden, N. J.
Solvay Sales Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Welch, Holme & Clark Co., 439 West St., N. Y.

SODIUM SESQUISILICATE

Cowles Detergent Co., 7016 Euclid Ave., Cleveland
Diamond Alkali Co., Standard Silicate Div., 535 Smithfield St., Pittsburgh
Innis, Speiden & Co., 117 Liberty St., N. Y.
MacKenzie Laboratories, Front & Yarnall Sts., Chester, Pa.
Philadelphia Quartz Co., 125 So. 3rd St., Phila.
Jos. Turner & Co., Ridgefield, N. J.
Welch, Holme & Clark Co., 439 West St., N. Y.

SODIUM SILICATE

(see also Dealers)

American Cyanamid & Chemical Corp., 30 Rockefeller Plaza, N. Y.
Diamond Alkali Co., Standard Silicate Div., 535 Smithfield St., Pittsburgh
E. I. du Pont de Nemours Co., Wilmington, Del.
Emeryville Chem. Co., 405 Montgomery St., San Francisco
General Chem. Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Mechling Bros. Chem. Co., Camden, N. J.
Philadelphia Quartz Co., 125 So. 3rd St., Phila.
Chas. L. Read & Co., 120 Greenwich St., N. Y.
Welch, Holme & Clark Co., 439 West St., N. Y.

DEMAND

Dobbins

DEPENDABILITY

*and Your
Spray Problems
are Solved*



**NO. 35 G HIGH PRESSURE
CHEMICAL SPRAYER**

The discharge has a wide range of adjustments, from a forceful, penetrating spray, to fine floating fog, with in-between variations. Controlled atomization through air regulator is an exclusive feature.



**NO. 43 G
PRESSURE SPRAYER**
... 3 QUART CAPACITY

With lever control. Can be operated as continuous sprayer by holding lever down while pumping. Very convenient and efficient.



NO. 704 ATOMIZER

A continuous type sprayer for spraying oils, chemicals, general household sprays. A popular model in Dobbins complete line of sprayers and atomizers in various sizes; part of these are equipped with patented two-way spray nozzle.



**No. 44-G
COMPRESSED AIR SPRAYER**

Easy to fill and clean. Flat spray nozzle cap, interchangeable with standard cap, permits application of DDT solutions as a residual spray. Flat, fan-shaped discharge furnishes ideal spray for whitewash, cold water paints, etc.

**NO. 80 PATENTED
SPRAY CAP**



Develops a wide, fan-shaped, flat spray that thoroughly covers a surface two feet in width. Enables the operator to prevent spray on walls, baseboards and furniture. Furnished with No. S-122-G Soap Sprayer.



NO. 133 NEW TYPE DUSTER

The most efficient hand-operated duster ever made. New design assures uniform and effective discharge. Capacity 1 pound.



**NO. 10 FLOOR
OIL SPRAYER**

With air regulator and volume control. 1½ gal. capacity.



NO. S-122-G SOAP SPRAYER

A convenient soap sprayer for janitor service. Hose, valves and all gaskets are made from materials that will withstand the caustic action of soap and cleaners.

DOBBINS MANUFACTURING CO.

Central Sales Office
ELKHART, IND.

Factories at
NORTH ST. PAUL, MINN.; ELKHART, IND

Dobbins
Superbilt
SPRAYERS · DUSTERS

SODIUM SILICOFLUORIDE

American British Chem. Supplies, Inc., 180 Madison Ave., N. Y.
American Cyanamid & Chem. Corp., 30 Rockefeller Plaza, N. Y.
American Fluoride Corp., 151 W. 19th St., N. Y.
Armour Fertilizer Wks., Atlanta, Ga.
Blockson Chemical Co., Joliet, Ill.
Concord Chem. Co., Independence Sq., Phila.
Croton Chem. Corp., 114 Liberty St., N. Y.
E. I. du Pont de Nemours Co., Wilmington, Del.
General Chem. Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Charles Hardy, Inc., 415 Lexington Ave., N. Y.
Harshaw Chemical Co., 1945 E. 97th St., Cleveland
Innis, Speiden & Co., 117 Liberty St., N. Y.
W. B. Lawson, Inc., Union Commerce Bldg., Cleveland
Merck & Co., Rahway, N. J.
Penn. Salt Mfg. Co., Widener Bldg., Phila.
Rosenthal Bercow Co., 25 E. 26th St., N. Y.
Sergeant Chem. Co., 7 Dey St., N. Y.
Henry Sundheimer, Inc., 103 Park Ave., N. Y.
Tennessee Corp., Atlanta, Ga.
Jos. Turner & Co., Ridgefield, N. J.

SOFT SOAPS (See Potash Soaps)

SOLUBLE OILS (See Sulfonated Oils)

SOLVENT NAPHTHA

Anderson-Prichard Oil Corp., Oklahoma City, Okla.
Atlantic Refining Co., 260 S. Broad St., Phila.
Barrett Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
S. H. Bell Co., 1407 Gulf Bldg., Pittsburgh
Commerce Petroleum Co., 2923 Lock St., Chicago
Deep Rock Oil Corp., 155 N. Clark St., Chicago
Disco Co., Oliver Bldg., Pittsburgh
Koppers Co., Koppers Bldg., Pittsburgh
Neville Co., Pittsburgh
Pennsylvania Refining Co., Butler, Pa.
Reilly Tar & Chemical Corp., Indianapolis
Shell Oil Co., 50 W. 50th St., N. Y.
Shell Petroleum Corp., Shell Bldg., St. Louis
Sinclair Refining Co., East Chicago, Ind.
Standard Oil Co. (Calif.), 225 Bush St., San Francisco
Standard Oil Co. (Ind.), 910 S. Michigan Ave., Chicago
Woburn Chemical Corp., Harrison, N. J.

SOLVENTS (Chlorinated, also alcohols, coal tar derivatives, etc.)

Barrett Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Carbide & Carbon Chem. Corp., 30 E. 42nd St., N. Y.
Commercial Solvents Corp., 17 E. 42nd St., N. Y.
Crosby Chemicals, Inc., De Ridder, La.
Diamond Alkali Co., 535 Smithfield St., Pittsburgh
Disco Co., Oliver Bldg., Pittsburgh
Delta Chemical Co., 2101 Washington Blvd., Baltimore
Dow Chemical Co., Midland, Mich.
E. I. du Pont de Nemours Co., Wilmington, Del.
Enjay Co., 15 W. 51st St., N. Y.
Hercules Powder Co., Wilmington
Hooker Electrochemical Co., Niagara Falls, N. Y.
Kessler Chem. Corp., Philadelphia
Koppers Co., Koppers Bldg., Pittsburgh
Monsanto Chemical Co., 1700 2nd St., St. Louis
Neville Co., Pittsburgh
Newport Industries, 230 Park Ave., N. Y.
Pennsylvania Refining Co., Butler, Pa.
Reilly Tar & Chemical Corp., 123 S. Broad St., Indianapolis
Sharples Solvents Corp., 100 Bush St., Phila.
Shell Chemical Corp., San Francisco
Skelly Oil Co., Kansas City
U. S. Industrial Chem. Co., 60 E. 42nd St., N. Y.
Velsicol Corp., 330 E. Grand Ave., Chicago
Westvaco Chlorine Prods. Co., 405 Lexington Ave., N. Y.

SOLVENTS, PETROLEUM

American Mineral Spirits Co., 230 N. Michigan Ave., Chicago
Anderson-Prichard Oil Co., Oklahoma City, Okla.
Atlantic Refining Co., 260 S. Broad St., Philadelphia
Carbide & Carbon Chem. Corp., 30 E. 42nd St., N. Y.
Commerce Petroleum Co., 2923 Lock St., Chicago
Deep Rock Oil Corp., 155 N. Clark St., Chicago
E. I. du Pont de Nemours Co., Wilmington, Del.
Oil States Pet. Co., 233 Broadway, N. Y.
Pennsylvania Refining Co., Butler, Pa.
Chas. L. Read & Co., 120 Greenwich St., N. Y.
Shell Oil Co., 50 W. 50th St., N. Y.
Sinclair Refining Co., 630 5th Ave., N. Y.
Skelly Oil Corp., 605 W. 47th St., Kansas City, Mo.
L. Sonneborn Sons, 88 Lexington Ave., N. Y.
Standard Oil Co. (Calif.), 225 Bush St., San Francisco
Standard Oil Co. (Ind.), 910 S. Michigan Ave., Chicago
Standard Oil Co. (Ohio), Midland Bldg., Cleveland
Velsicol Corp., 330 E. Grand Ave., Chicago

SOYA BEAN OIL

(see also Brokers and Dealers)

Balfour, Guthrie Co., 67 Wall St., N. Y.
Irving R. Boody & Co., 120 Wall St., N. Y.
E. F. Drew & Co., Wecoline Div., Boonton, N. J.
Eastern Industries, Inc., Ridgefield, N. J.
William O. Goodrich Co., Milwaukee, Wis.
W. R. Grace & Co., 7 Hanover Sq., N. Y.
Spencer Kellogg & Son, Buffalo, N. Y.
Leghorn Trading Co., 21 West St., N. Y.
Pacific Vegetable Oil Co., 62 Townsend St., San Francisco
Procter & Gamble Co., Cincinnati
Purina Mills, St. Louis
Werner G. Smith Co., 2191 W. 110th St., Cleveland
A. E. Staley Mfg. Co., Decatur, Ill.
A. E. Starkie Co., 5461 W. Division St., Chicago
Welch, Holme & Clark Co., 439 West St., N. Y.

SPERMACETI

E. A. Bromund Co., 258 Broadway, N. Y.
A. C. Drury & Co., 210 E. Water St., Chicago
Innis, Speiden & Co., 117 Liberty St., N. Y.
Lenape Trading Co., 233 Broadway, N. Y.
George H. Lincks, 155 John St., N. Y.
Neumann-Buslee & Wolfe, 224 W. Huron St., Chicago
Orbis Products Corp., 215 Pearl St., N. Y.
S. B. Penick & Co., 50 Church St., N. Y.
R. J. Prentiss & Co., 110 William St., N. Y.
Rosenthal Bercow Co., 25 E. 26th St., N. Y.
L. A. Salomon & Bro., 216 Pearl St., N. Y.
Werner G. Smith Co., 2191 W. 110th St., Cleveland
Smith & Nichols, 121 Maiden Lane, N. Y.
Strohmeyer & Arpe Co., 139 Franklin St., N. Y.
Will & Baumer Candle Co., Syracuse, N. Y.

SPONGES (Natural and Synthetic)

Addison Sponge Co., 118 E. Court St., Cincinnati
Allied Industrial Prods. Co., 620 N. Michigan, Chicago
American Sponge & Chamois Co., 47 Ann St., N. Y.
American Standard Mfg. Co., 2509 S. Green St., Chicago
Atlas Sponge Co., 291 Church St., N. Y.
E. I. du Pont de Nemours & Co., Wilmington
Florida Sponge & Chamois Co., 42 Cliff St., N. Y.
Great Eastern Sponge & Chamois Co., 833 N. Catt. Pk. Ave., Baltimore
James H. Rhodes & Co., 157 W. Hubbard St., Chicago
Robinson Sponge Co., 1805 Atlantic Ave., Brooklyn

SPOTTING FLUIDS (see Cleaning Fluids)

SPOUTS (see Can Spouts, Closures)

SPRAYERS, BOTTLE

Arnold-Copeland Co., 22 Elkins St., So. Boston, Mass.
Federal Tool Corp., 412 N. Leavitt St., Chicago
Wilco Co., 7016 McKinley Ave., Los Angeles

"Make" or "Break"?



The first experience is the one that counts

The Sprayer In The Picture . . .

is a Hudson Misty* No-Drip, a favorite for household spraying. Recessed non-drip cup prevents messy dripping . . . Patented "Nu-Action"* pump assures maximum air pressure and maximum vaporization with extremely light pumping. One of numerous types and sizes.

Product quality, packaging, promotion, advertising can make first sales for your product. But the profitable sales are the repeat sales. And repeat sales depend on satisfaction with the first experience. That means your product must be applied right—must get the best chance to prove its merit to buyers.

Proper application of insecticides, disinfectants, mothicides or deodorants has been a major Hudson project for

over 40 years. That's why you'll find in this broad line the right type of sprayer or duster for YOUR product. And that sprayer or duster will be easy to use, without muss or waste. It will help assure the right application—will help you build year-after-year repeat business.

Ask a Hudson representative to co-operate with you in determining the best applicator for your product. Write us to arrange an early meeting.

© 1947 H. D. H. MFG. CO.

*REG. U. S. PAT. OFF.

H. D. HUDSON MANUFACTURING COMPANY • 589 E. Illinois Street, Chicago, Illinois, U. S. A.



TESTED AND PROVED EQUIPMENT

HUDSON DUSTER

SPRAYERS, COMPRESSED AIR

Acmeline Mfg. Co., Traverse City, Mich.
Binks Mfg. Co., 3114 Carroll Ave., Chicago
E. C. Brown Co., Rochester, N. Y.
R. E. Chapin Mfg. Works, Batavia, N. Y.
DeVilbiss Co., Toledo, O.
Dobbins Mfg. Co., Elkhart, Ind.
Electric Sprayit Co., 1415 Illinois Ave., Sheboygan, Wis.
Fumeral Co., Racine, Wis. (built in systems)
Hudson Mfg. Co., 589 E. Illinois St., Chicago
Imperial Brass Mfg. Co., 1200 W. Harrison St., Chicago
Lofstrand Co., Rockville, Md.
Lowell Mfg. Co., 589 E. Illinois St., Chicago
Miller-Simons, Inc., 2900 S. 61st Court, Chicago
Mystic Products Co., 415 N. 5th Ave., S., Minneapolis
Piezo Mfg. Corp., 110 E. 42nd St., N. Y.
Simmon Paint Spray Brush Co., Dayton, O.
Universal Metal Prods. Co., Lowell, Mich.
Volume Sprayer Mfg. Co., Tulsa, Okla.

SPRAYERS, ELECTRIC

Acmeline Mfg. Co., Traverse City, Mich.
Binks Mfg. Co., 3114 Carroll Ave., Chicago
DuLa Mfg. Co., 351 Atlantic Ave., Brooklyn, N. Y.
Electric Sprayit Co., 1415 Illinois Ave., Sheboygan, Wis.
Fumeral Co., Racine, Wis.
Hudson Mfg. Co., 589 E. Illinois St., Chicago
Lowell Mfg. Co., 589 E. Illinois St., Chicago
Metal Specialties Mfg. Co., 3208 Carroll Ave., Chicago
Piezo Mfg. Corp., 110 E. 42nd St., N. Y.
Sprayer Corp. of America, 1712 Payne St., Evanston, Ill.

SPRAYERS, ELECTRIC, STEAM

DuLa Mfg. Co., 351 Atlantic Ave., Brooklyn
Fumeral Co., Racine, Wis.
Hydro-Mist Corp., 531 State St., Glendale, Calif.
Kaz Mfg. Co., 611 W. 43rd St., N. Y.
Lowell Mfg. Co., North Pier Terminal, Chicago
Mayfair Industries, 2442 Irving Park Road, Chicago
Mystic Products Co., 415 N. 5th Ave., S., Minneapolis
Sanitary Aids Co., St. Louis

SPRAYERS, HAND

Acmeline Mfg. Co., Traverse City, Mich.
R. E. Chapin Mfg. Works, Batavia, N. Y.
Dobbins Mfg. Co., Elkhart, Ind.
Electric Sprayit Co., 1415 Illinois Ave., Sheboygan, Wis.
Hudson Mfg. Co., 589 E. Illinois St., Chicago
Jaech Mfg. Co., Cincinnati
Lowell Mfg. Co., 589 E. Illinois St., Chicago
D. B. Smith Co., Utica, N. Y.
Standard Container, Inc., Rockaway, N. J.
Universal Metal Prods. Co., Lowell, Mich.
Volume Sprayer Mfg. Co., Tulsa, Okla.
Wilco Co., 6800 McKinley Ave., Los Angeles

SPRAYERS, MOUTH

Acmeline Mfg. Co., Traverse City, Mich.
Arnold-Copeland Co., 22 Elkins St., So. Boston, Mass.
H. D. Hudson Mfg. Co., 589 E. Illinois St., Chicago
Lowell Mfg. Co., 589 E. Illinois St., Chicago
D. B. Smith & Co., Utica, N. Y.
Standard Container, Inc., Montclair, N. J.

SPRAYERS, POWER (Heavy Duty)

Banta & Driscoll Co., 4729 E. Olympic Blvd., Los Angeles
John Bean Mfg. Co., Div. Food Mach. Co., Lansing, Mich.
Besler Corp., 4053 Harlan St., Emeryville, Calif.
Buffalo Turbine Agri. Equip. Co., Gowanda, N. Y.
Dobbins Mfg. Co., Elkhart, Ind.
A. B. Farquhar Co., 142 N. Duke St., York, Pa.
Fumeral Co., Racine, Wis.
Hession Microsol Corp., 166 Post Rd., Darien, Conn.
Howard Hanson & Co., Beloit, Wis.
H. D. Hudson Mfg. Co., 589 E. Illinois St., Chicago

Hydro-Mist Corp., 531 State St., Glendale, Calif.
Madewell Products, 3125 E. 7th St., Oakland, Calif.
Mayfair Industries, 2442 Irving Park Road, Chicago
Mullen Crafts Co., 25 Pennsylvania St., Evansville, Ind.
Oberdorfer Foundries, Inc., 5100 Thompson Rd., Syracuse
Todd Shipyards Corp., 601 W. 26th Street, N. Y.
Victor Products Corp., Funkhouser Industries Bldg.,
Ransom, W. Va.
Virginia Smelting Co., W. Norfolk, Va.

SPRAYERS, NOZZLES for

Spraying Systems Co., 4027 W. Lake St., Chicago

SPRAY SYSTEMS, PERMANENT INSTALLATIONS

Fumeral Co., Racine, Wisc.
Virginia Smelting Co., West Norfolk, Va.

SPREADERS for INSECTICIDE (see Clays, Emulsifiers, etc.)

SQUEEGEES

Ardmore Mfg. Co., 5082 N. Lincoln Ave., Chicago
W. J. Dennis & Co., 1732 N. Kolmar, Chicago
A. F. Dormeyer Mfg. Co., 4316 N. Kilpatk. St., Chicago
Aug. Hanke & Son Co., 6326 W. Guyer Ave., Chicago
Illinois Duster & Brush Co., 1944 Webster Ave., Chicago
J. Racenstein & Co., 621 Broadway, N. Y.
Reliance Hardward & Mfg. Co., 1438 N. Keating St.,
Chicago
White Mop Wringer Co., Fultonville, N. Y.

SQUILLS (Rodent Poison)

Associated Chemists, Inc., 1906 N. Halsted Ave., Chicago
J. L. Hopkins & Co., 220 Broadway, N. Y.
McLaughlin Gormley King Co., 1715 5th St., S. E.,
Minneapolis, Minn.
S. B. Penick & Co., 50 Church St., N. Y.
R. J. Prentiss & Co., 110 William St., N. Y.
Ratin Laboratory, 116 Broad St., N. Y.
York Chem. Co., 23 Dean St., Bklyn.

STANNOUS CHLORIDE (see Tin Crystals)

STARCH

(see also Dealers)

American Cyanamid & Chem. Corp., 30 Rockefeller
Plaza, N. Y.
Arabol Mfg. Co., 110 E. 42nd St., N. Y.
T. G. Cooper & Co., Cedar and Venango Sts., Phila.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Keever Starch Co., Columbus, O.
H. Kohnstamm & Co., 91 Park Pl., N. Y.
National Starch Prods., 270 Madison Ave., N. Y.
Orbis Products Corp., 215 Pearl St., N. Y.
L. A. Salomon & Bro., 216 Pearl St.
A. E. Staley Mfg. Co., Decatur, Ill.
Welch, Holme & Clark Co., 439 West St., N. Y.

STEARATES (Zinc, Calcium, Magnesium, etc)

(see also Dealers)

American Cyanamid & Chem. Corp., 30 Rockefeller
Plaza, N. Y.
Cuprinol Inc., 7 Water St., Boston
E. I. du Pont de Nemours Co., Wilmington, Del.
R. W. Greeff & Co., 10 Rockefeller Plaza, N. Y.
W. C. Hardesty Co., 41 E. 42nd St., N. Y. (Glyceryl,
Glycol)
Harshaw Chemical Co., 1945 E. 97th St., Cleveland
Hooker Electrochemical Co., Niagara Falls, N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Kessler Chem. Co., 7272 State Rd., Phila.
Mallinckrodt Chem. Wks., St. Louis
Merck & Co., Rahway, N. J.
Metasap Chem. Co., First & Essex Sts., Harrison, N. J.
Nopco Chem. Co., Harrison, N. J.

STEARATES (Contd.)

M. W. Parsons, Inc., 59 Beekman St., N. Y.
Rosenthal Bercow Co., 25 E. 26th St., N. Y.
Synthetic Products Co.,
London Rd. & Euclid Ave., Cleveland
Jos. Turner & Co., Ridgefield, N. J.
Chas. A. Wagner Co., 813 Callowhill St., Phila.
Whittaker, Clark & Daniels, 260 W. Bway., N. Y.
Witco Chemical Co., 295 Madison Ave., N. Y.

STEARIC ACID

(see also Brokers and Dealers)

American British Chem. Supplies, Inc., 180 Madison Ave., N. Y.
American Cyanamid & Chem. Corp., 30 Rockefeller Plaza, N. Y.
Armour Chem. Div., Armour & Co., 1355 W. 31st St., Chicago
Celina Stearic Acid Co., Celina, Ohio
Century Stearic Acid Candle Wks., 41 E. 42nd St., N. Y.
Chemical Sales Corp., Pittsburgh, 19
Darling & Co., 4201 S. Ashland Ave., Chicago
E. F. Drew & Co., Wecoline Div., Boonton, N. J.
Eastern Industries, Inc., Ridgefield, N. J.
Emery Industries, Inc., 4300 Carew Tower, Cincinnati
A. Gross & Co., 295 Madison Ave., N. Y.
Griffin Chem. Co., 1000 16th St., San Francisco
W. C. Hardesty Co., 41 E. 42nd St., N. Y.
Harkness & Cowing, Ivorydale, Cincinnati
Innis, Speiden & Co., 117 Liberty St., N. Y.
Merck & Co., Rahway, N. J.
Nopco Chem. Co., Harrison, N. J.
Orbis Products Corp., 215 Pearl St., N. Y.
Procter & Gamble Co., Cincinnati
Rosenthal Bercow Co., 25 E. 26th St., N. Y.
Werner G. Smith Co., 2191 W. 110th St., Cleveland
A. E. Starkie, 5461 W. Division St., Chicago
Theobald Industries, Kearny, N. J.
Welch, Holme & Clark Co., 439 West St., N. Y.
M. Werk Co., St. Bernard, Cincinnati
Will & Baumer Candle Co., Syracuse, N. Y.
Wilson-Martin Co., Snyder Ave. & Swanson St., Phila.
Witco Chemical Co., 295 Madison Ave., N. Y.

STEARINE

(see also Brokers and Dealers)

Celina Stearic Acid Co., Celina, Ohio
Darling & Co., 4201 S. Ashland Ave., Chicago
Durkee Famous Foods, Inc., 2670 Elston Ave., Chicago
Eastern Industries, Inc., Ridgefield, N. J.
Emery Industries, Inc., 4300 Carew Tower, Cincinnati
Independent Mfg. Co., Bridesburg P. O., Phila.
Morris Co., Union Stock Yards, Chicago
Pacific Vegetable Oil Corp., 62 Townsend St., San Francisco
Procter & Gamble Co., Cincinnati
Werner G. Smith Co., 2191 W. 110th St., Cleveland
A. E. Starkie, 5461 W. Division St., Chicago
Louis Stern Sons, Inc., Produce Exch., N. Y.
Swift & Co., Union Stock Yards, Chicago
Welch, Holme & Clark Co., 439 West St., N. Y.
Wilson & Co., 4100 Ashland Ave., Chicago
G. S. Ziegler & Co., 233 Bdway, N. Y.

STEARINE PITCH

Allied Asphalt & Mineral Corp., 217 Broadway, N. Y.
Armour Chem. Div., Armour & Co., 1355 W. 31st St., Chicago
Darling & Co., 4201 S. Ashland Ave., Chicago
Eastern Industries, Inc., Ridgefield, N. J.
Emery Industries, Inc., 4300 Carew Tower, Cincinnati
A. Gross & Co., 295 Madison Ave., N. Y.
W. C. Hardesty Co., 41 E. 42nd St., N. Y.
Procter & Gamble Co., Ivorydale, O.
Werner G. Smith Co., 2191 W. 110th St., Cleveland
A. E. Starkie, 5461 W. Division St., Chicago
Wilson & Co., 4100 Ashland Ave., Chicago
G. S. Ziegler & Co., 233 Broadway, N. Y.

STEEL DRUMS (see Drums, Steel)

STEEL PAILS (see Pails, Steel)

STEEL, NICKEL CLAD

Illinois Steel Co., 208 S. La Salle St., Chicago
International Nickel Co., 67 Wall St., N. Y.
Lukens Steel Co., Coatesville, Pa.
Republic Steel Corp., Republic Bldg., Cleveland, O.

STEEL TANKS (see Tanks, Steel)

STEEL WOOL

American Steel Wool Mfg. Co., 42-24 Orchard St., L. I. City, N. Y.
International Steel Wool Co., Springfield, Ohio
Multi-Clean Prods., Inc., 2277 Ford Pkway, St. Paul, Minn.
James H. Rhodes & Co., 157 W. Hubbard St., Chicago
Williams Co., London, Ohio

STODDARD'S SOLVENT (see Solvents, Petroleum)

STORAGE TANKS (see Tanks, Storage, etc.)

SUDSING EQUIPMENT (see Soap Solutionizing Device)

SULFATED FATTY ALCOHOLS (and other Non-Soap Organic Detergents, and Derivatives (see also Detergents, Synthetic)

Alrose Chem. Co., Box 1294, Providence, R. I.
Carbide & Carbon Chemicals Corp., 30 E. 42nd St., N. Y.
Colgate-Palmolive-Peet Co., Jersey City, N. J.
E. F. Drew & Co., Boonton, N. J.
E. I. du Pont de Nemours Co., Wilmington, Del.
Emulsol Corp., 59 E. Madison St., Chicago
General Dyestuff Corp., 435 Hudson St., N. Y.
Hummel Chemical Co., 90 West St., N. Y.
N. I. Malmstrom & Co., 147 Lombardy St., Brooklyn
M. Michel & Co., 90 Broad St., N. Y.
Monsanto Chem. Co., 1700 S. 2nd St., St. Louis
National Aniline Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Nopco Chem. Co., Harrison, N. J.
Procter & Gamble Co., Cincinnati
Richards Sales Corp., Jersey City, N. J.
Sandoz Chemical Works, 61 Van Dam St., N. Y.
Ultra Chem. Wks., 2 Wood St., Paterson, N. J.
Jacques Wolfe & Co., Passaic, N. J.

SULFONATED OILS

American Cyanamid & Chem. Corp., 30 Rockefeller Plaza, N. Y.
Antara Prods. Div., Gen. Aniline & Film Corp., 444 Madison Ave., N. Y.
Atlantic Refining Co., 260 S. Broad St., Phila.
Carbide & Carbon Chem. Corp., 30 E. 42nd St., N. Y.
Colloids, Inc., 395 Frelinghuysen Ave., Newark, N. J.
E. F. Drew & Co., Wecoline Div., Boonton, N. J.
Eastern Industries, Inc., Ridgefield, N. J.
Emery Industries, 4300 Carew Tower, Cincinnati
General Dyestuff Corp., 435 Hudson St., N. Y.
Hercules Powder Co., Wilmington
Kali Mfg. Co., 1408 N. Front St., Philadelphia
Nopco Chem. Co., Harrison, N. J.
Rare Chemicals, Inc., 1st and Essex Sts., Harrison, N. J.
Richards Sales Corp., Jersey City, N. J.
Sandoz Chemical Works, 61 Van Dam St., N. Y.
L. Sonneborn Sons, 88 Lexington Ave., N. Y.
A. E. Starkie, 5461 W. Division St., Chicago
Arthur C. Trask Co., 4103 S. La Salle St., Chicago
Ultra Chem. Wks., 2 Wood St., Paterson, N. J.
Warwick Chem. Co., West Warwick, R. I.
Welch, Holme & Clark Co., 439 West St., N. Y.
Jacques Wolfe & Co., Passaic, N. J.

SULFOXYLATES (Soap Bleaches)

Rohm & Haas Co., Inc., 222 W. Washington Sq., Phila.
Jacques Wolfe & Co., Passaic, N. J.

SULFUR CANDLES

Koppers Co., White Tar Div., Kearny, N. J.
Reliable Chemical Co., Passaic, N. J.

SUPERFATTING AGENTS (for Toilet Soaps)

Alrose Chem. Co., Box 1294, Providence, R. I.
Antara Prods. Div., Gen. Aniline & Film Corp., 444
Madison Ave., N. Y.
N. I. Malmstrom Co., 147 Lombardy St., Bklyn.
M. Michel & Co., 90 Broad St., N. Y.
Nopco Chem. Co., Harrison, N. J.
Pfaltz & Bauer, 350 5th Ave., N. Y.
Pylam Products Co., 799 Greenwich St., N. Y.
Richards Sales Corp., Jersey City, N. J.
Robinson Wagner Co., 110 E. 42nd St., N. Y.
Welch, Holme & Clark Co., 439 West St., N. Y.

SUPERHEATERS

Eureka Machine Co., 2601 Vega Ave., Cleveland
Ernest Scott & Co., Fall River, Mass.
The Superheater Co., 60 E. 42nd St., N. Y.

SURGICAL SOAPS (see Potash Soaps)**SWEEPING COMPOUNDS**

A-1 Floor Sweep Co., 1923 N. Haskell, Dallas
American Excelsior Corp., 1000 N. Halstead St., Chicago
American Soap & Washoline Co., Cohoes, N. Y.
Banner Chemical Prod. Corp., 60 Elm St., Newark, N. J.
Baums Castorine Co., 200 Matthews St., Rome, N. Y.
Philip Carey Mfg. Co., Lockland, Cincinnati
Chicago Sanitary Prods. Co., 3100 S. Throop St., Chicago
Creco Co., Inc., Creco Bldg., Long Island City, N. Y.
Eagle Soap Corp., Huntington, Ind.
Filtrol Corp., 634 S. Spring St., Los Angeles
Fitch Dustdown Co., 801 S. Howard St., Baltimore
Fuld Bros., 702 S. Wolfe St., Baltimore
Higley Chemical Co., Dubuque, Iowa
Hockwald Chem. Co., 135 Mississippi St., San Francisco
R. M. Hollingshead Corp., Camden, N. J.
Hubman Supply Co., 225 N. 4th St., Columbus, O.
Hysan Products Co., 932 W. 38th Place, Chicago
Klix Chem. Co., 2460 Third St., San Francisco
Kamen Soap Prods. Co., Woolworth Bldg., N. Y.
Frank Miller & Sons, 2240 W. 58th St., Chicago
Natl. Sawdust Co., 69 N. 6th St., Bklyn.
North Coast Soap & Chem. Wks., Seattle, Wash.
Pacific Chem. Co., 1421 N. Main St., Los Angeles
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Pioneer Mfg. Co., Cleveland, O.
Port Huron Detergent Co., Port Huron, Mich.
Puritan Chem. Co., 209 Peters St., N. W. Atlanta
Riverside Chem. Co., N. Tonawanda, N. Y.
Theo. B. Robertson Prods. Co., 700 W. Division St.,
Chicago
Sanco Prods. Inc., Greenville, O.
Sanitary Soap Co., 104 Railroad Ave., Paterson, N. J.
E. B. Snyder Co., 2137 E. Harold St., Philadelphia
Jno. C. F. Snyder & Sons, Inc., 2304 N. 28th St., Phila.
Solshine Mfg. Co., 412—2nd St., Fall River, Mass.
Standard Chem. Co., 213 Jackson St., Houston, Tex.
Sweeping Compound Mfrs. Co., 421 Broome St., N. Y.
Tesco Chem. Co., P. O. Box 4748, Atlanta
Texas Soap Mfg. Corp., 4905 Calhoun Rd., Houston
Texol Chem. Wks., 3 Winter St., Worcester, Mass.
Uncle Sam Chemical Co., 573 W. 131st St., N. Y. C.
U. S. Sanitary Specialties Corp., 435 S. Western Ave.,
Chicago

**SYNTHETIC DETERGENTS (see Detergents,
Synthetic)****SYNTHETIC INSECTICIDE CONCENTRATES (see
Insecticide Concentrates, Synthetic)****SYNTHETIC WAXES (see Waxes, Synthetic)****TALC**

American Cyanamid & Chem. Corp., 30 Rockefeller,
Plaza, N. Y.
Binney & Smith Co., 41 E. 42nd St., N. Y.
Blue Ridge Talc Co., Henry, Va.
Chas. B. Chrystal Co., 53 Park Pl., N. Y.
A. C. Drury & Co., 219 East North Water St., Chicago
E. I. du Pont de Nemours Co., Wilmington, Del.
Eastern Magnesia Talc Co., Burlington, Vt.
Enco Chem. Corp., 441 Lexington Ave., N. Y.
Fexandie & Sperrle, 205 Fulton St., N. Y.
Georgia Talc Co., Asheville, N. C.
Goris & Co., 8124 S. Hoyne Ave., Chicago
K. F. Griffiths & Co., 110 E. 42nd St., N. Y.
Hammill & Gillespie, 225 Broadway, N. Y.
Hercules Powder Co., Wilmington, Del.
Innis, Speiden & Co., 117 Liberty St., N. Y.
Los Angeles Talc Co., Los Angeles, Cal.
Natura Minerals Co., 108 W. 6th St., Los Angeles
Orbis Products Corp., 215 Pearl St., N. Y.
Pacific Coast Talc Co., Los Angeles, Cal.
R. F. Revson Co., 144 W. 18th St., N. Y.
James H. Rhodes & Co., 157 W. Hubbard St., Chicago
Rosenthal Bercow Co., 25 E. 26th St., N. Y.
L. A. Salomon & Bro., 216 Pearl St., N. Y.
F. E. Schundler & Co., Joliet, Ill.
A. E. Starkie, 5461 W. Division St., Chicago
Tamma Silica Co., 228 N. La Salle St., Chicago
Union Talc Co., 147 Nassau St., N. Y.
R. T. Vanderbilt Co., 230 Park Ave., N. Y.
Chas. A. Wagner Co., 813 Callowhill St., Phila.
Welch, Holme & Clark Co., Inc., 439 West St., N. Y.
Whittaker, Clark & Daniels, 260 W. Broadway, N. Y.
Witco Chemical Co., 295 Madison Ave., N. Y.
Wyodak Chemical Co., 4600 E. 71st St., Cleveland

TALL OIL (TALLOL)

Arizona Chemical Co., 30 Rockefeller Plaza, New York
Brunswick Pulp & Paper Co., Brunswick, Ga.
Camp Manufacturing Co., Franklin, Va.
Champion Paper & Fibre Co., Canton, N. C.
Continental Can Co., Hummel-Ross Division, Hopewell,
Va.
Gaylord Container Corp., 111 North Fourth St., St.
Louis
Gulf States Paper Co., Tuscaloosa, Ala.
National Southern Products Corp., 630 Fifth Avenue,
New York
Newport Industries, Inc., 230 Park Avenue, New York
North Carolina Pulp Co., Camden, N. J.
Southern Advance Bag & Paper Co., 38 Newbury St.,
Boston
Union Bag & Paper Corp., 52 Broadway, New York
West Virginia Pulp & Paper Co., 230 Park Ave., New
York

TALLOW and GREASE

(see also Brokers and Dealers)

Armour & Co., 1355 W. 31st St., Chicago
Belleville Rendering Co., Belleville, Ill.
Borne Scrymser Co., 632 S. Front St., Elizabeth, N. J.
Consolidated Rendering Co., 178 Atlantic Ave., Boston
Cudahy Packing Co., 111 W. Monroe St., Chicago
Darling & Co., 4201 S. Ashland Ave., Chicago
Eastern Industries, Inc., Ridgefield, N. J.
Otto A. C. Hagen Corp., Public Ledger Bldg., Phila.
Independent Mfg. Co., Bridesburg P. O., Phila.
Long Island Soap Co., 29 Bridgewater St., Brooklyn
Louisville Butchers' Hide & Tallow Co., Louisville, Ky.
Newman Tallow & Soap Mach. Co., 1051 W. 35th, Chicago
Willibald Schaefer Co., Foot of Bremen Ave., St. Louis
Werner G. Smith Co., 2191 W. 110th St., Cleveland
Swift & Co., Union Stock Yards, Chicago
Theobald Industries, Kearny, N. J.
Toledo Tallow Co., Toledo, Ohio
Waltham Tallow Co., Waltham, Mass.
Wayne Soap Co., Detroit
Welch, Holme & Clark Co., Inc., 439 West St., N. Y.
Wilson & Co., Union Stock Yards, Chicago
Wilson-Martin Co., Swanson St., Phila.

TAR ACID OIL

for use in

DISINFECTANTS

and

CLEANING COMPOUNDS

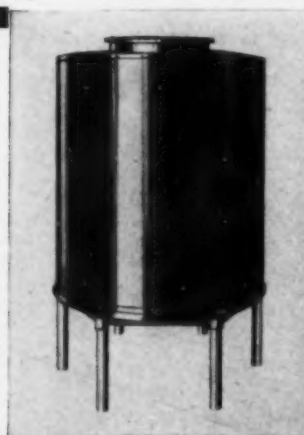
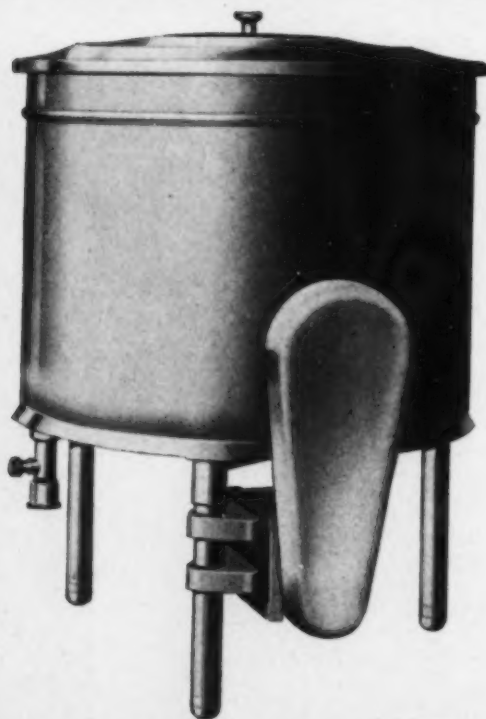
Unusually High in Tar Acids
MADE from LOW TEMPERATURE COAL TAR

DISCO COMPANY

H. W. Oliver Bldg.

Pittsburgh 22, Pa.

Producers and Refiners of Coal Tar and Its Products



*Write for
Catalog*

**STAINLESS
STEEL
PROCESSING
AND
STORAGE
VESSELS**

We build them in many capacities and styles for standard or special uses.

All seams are welded inside and out. Welds are ground perfectly smooth and polished. Easy to clean and keep sanitary. Bottoms on most styles are designed to be self-draining. Highest quality finish and workmanship.

Mixing units, flush valves, faucets, and other fittings required for your individual requirements, are readily adaptable. Let us figure on your next requirements.

PFAHLER - CLELAND CO.
STAINLESS STEEL TANK SPECIALISTS
GALION, OHIO

TALLOW CHIP SOAP (see Chip Soaps)

TALLOW OIL

(see also Brokers and Dealers)

Armour & Co., 1355 W. 31st St., Chicago
Consolidated Rendering Co., 40 N. Market St., Boston
Cudahy Packing Co., 111 W. Monroe St., Chicago
Eastern Industries, Inc., Ridgefield, N. J.
Griffin Chem. Co., 1000 16th St., San Francisco
W. C. Hardesty Co., 41 E. 42nd St., N. Y.
Independent Mfg. Co., Bridesburg, P. O., Phila
Swift & Co., Union Stock Yards, Chicago
Toledo Tallow Co., Toledo, Ohio
Waltham Tallow Co., Waltham, Mass.
Welch, Holme & Clark Co., Inc., 439 West St., N. Y.
West Coast Fert. & Rendering Co., Los Angeles
Wilson & Co., Union Stock Yards, Chicago

TANKS (Glass Lined Mixing and Storage)

Allied Steel & Equip. Co., 1007 Springfield Ave., Irvington, N. J.
Alsop Engineering Corp., 103 Green St., Milldale, Conn.
Consolidated Products Co., 15 Park Row, N. Y. (Used)
Edge Moor Iron Wks., 30 Rockefeller Plaza, N. Y.
Ertel Engineering Co., Kingston, N. Y.
Filter Paper Co., 2464 S. Michigan Ave., Chicago
First Machy. Corp., 157 Hudson St., N. Y. (Used)
Littleford Bros., 453 E. Pearl St., Cincinnati
Metal Glass Products Corp., Belding, Mich.
Mixing Equipment Co., 1067 Garson Ave., Rochester
Newman Tallow & Soap Mach. Co., 1051 W. 35th, Chicago
Pfandler Co., 89 East Ave., Rochester, N. Y.
H. K. Porter Co., 49th & Harrison Sts., Pittsburgh
Geo. G. Rodgers Co., 225 W. 34th St., N. Y.
Scientific Filter Co., 1 Franklin Sq., N. Y.
Sprout, Waldron & Co., Muncy, Pa.
Stein Equipment Co., 90 West St., N. Y. (Used)

TANKS (for Liquid Soap Dispensing Systems)

Ampion Corp., 4-88—Forty-seventh Ave., L. I. City, N. Y.
Antiseptol Co., 5524 Northwest Highway, Chicago
Bobrick Mfg. Corp., 1839 Blake Ave., Los Angeles
Brighton Copper Works, 2163 Western Ave., Cincinnati
Clifton Chemical Co., 62 William St., N. Y.
Eagle Soap Corp., Huntington, Ind.
Fuld Bros., Inc., 702 S. Wolfe St., Baltimore
R. M. Hollingshead Corp., Camden, N. J.
Imperial Brass Mfg Co., 1200 W. Harrison St., Chicago
Palmer Fixture Co., Waukesha, Wisc.
Rochester Germicide Co., Rochester, N. Y.
John Trageser Steam Copper Works, Grand Ave., Maspeth, L. I., N. Y.
U. S. Sanitary Spec. Corp., 435 S. Western Ave., Chicago
West Disinfecting Co., Long Island City, N. Y.

TANKS (Steel, Mixing, Storage, etc.)

Allied Steel & Equip. Co., 1007 Springfield Ave., Irvington, N. J.
Alloy Prods. Corp., 221 Madison St., Waukesha, Wis.
Alsop Engineering Corp., 103 Green St., Milldale, Conn.
Atlas Steel Construction Co., Irvington, N. Y.
S. F. Bowser & Co., Ft. Wayne, Ind.
Consolidated Prods. Co., 15 Park Row, N. Y. (Used)
J. H. Day Co., 1144 Harrison Ave., Cincinnati
Edge Moor Iron Wks., Edge Moor, Del.
Filter Paper Co., 2464 S. Michigan Ave., Chicago
First Machy. Corp., 157 Hudson St., N. Y. (Used)
William Garrigue & Co., 9 S. Clinton St., Chicago
General American Transportation Corp., 135 S. LaSalle St., Chicago
Graver Tank & Mfg. Corp., 332 S. Michigan, Chicago
Houchin Machinery Co., Hawthorne, N. J.
Huber Machine Co., 259—46th St., Brooklyn
Hudson Mfg. Co., 589 E. Illinois St., Chicago
Illinois Steel Corp., 208 S. LaSalle St., Chicago
Lancaster Iron Works, 564 S. Prince St., Lancaster, Pa.
J. M. Lehmann Co., Lyndhurst, N. J.
Littleford Bros., 453 E. Pearl St., Cincinnati
Lukens Steel Corp., Coatesville, Pa.
Mixing Equipment Co., 1067 Garson Ave., Rochester

Newman Tallow & Soap Mach. Co., 1051 W. 35th St., Chicago (Used)
Patterson Foundry & Machine Co., East Liverpool, Ohio
Patterson-Kelley Co., East Stroudsburg, Pa.
Petroleum Iron Works, Sharon, Pa.
Pfahler Cleland Co., Galion, O.
Pfandler Co., Rochester, N. Y.
Pioneer Tank & Boiler Co., Tulsa, Okla.
H. K. Porter Co., 49th & Harrison Sts., Pittsburgh
Read Machy Co., York, Pa.
Geo. G. Rodgers Co., 225 W. 34th St., N. Y.
Sprout, Waldron & Co., Muncy, Pa.
Stein Equipment Co., 90 West St., N. Y. (Used)
Struthers-Wells Corp., Warren, Pa.
John Trageser Steam Copper Works, Grand St., Maspeth, L. I., N. Y.

TANKS (Wooden, Mixing, Storage, etc.)

Atlantic Tank & Barrel Co., North Bergen, N. J.
J. H. Day Co., 1144 Harrison Ave., Cincinnati
General Tank Corp., 30 Church St., N. Y.
Hauser-Stander Tank Co., Ivorydale, Cinn.
H. D. Hudson Mfg., 589 E. Illinois St., Chicago
Kalamazoo Tank & Silo Co., Kalamazoo, Mich.
New England Tank & Tower Co., Everett, Mass.
Pacific Tank & Pipe Co., 334 Market St., San Francisco
H. K. Porter Co., 49th & Harrison Sts., Pittsburgh
Read Machy. Co., York, Pa.
Sprout, Waldron & Co., Muncy, Pa.
Tippett & Wood, Phillipsburg, N. J.

TAR ACID OIL (see Coal Tar Raw Materials)

TAR ACIDS, High Boiling

American-British Chem. Supplies, Inc., 180 Madison Ave., N. Y.
Baird & McGuire, Inc., Holbrook, Mass.
Barrett Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
S. H. Bell Co., 1407 Gulf Bldg., Pittsburgh
Coal Tar Chemicals Corp., 420 Lexington Ave., N. Y.
E. I. du Pont de Nemours Co., Wilmington, Del.
James Huggins & Son, 239 Medford St., Malden, Mass.
Wm. E. Jordan & Bro., 2590 Atlantic Ave., Brooklyn
Koppers Co., Koppers Bldg., Pittsburgh, Pa.
Mirvale Chem. Co., Ltd., Mirfield, Yorks, England
Monsanto Chemical Co., 1700 S. 2nd St., St. Louis
Neville Co., Pittsburgh
Reilly Tar & Chem. Co., Indianapolis
Shell Oil Co., 50 W. 50th St., N. Y.
James Varley & Sons, 1200 Switzer Ave., St. Louis

TERPENYL ACETATE (see Aromatic Chemicals)

TERPINEOL

(see also Essential Oils)

van Ameringen-Haebler, Inc., 315 Fourth Ave., N. Y.
Aromatic Products, Inc., 15 E. 30th St., N. Y.
Crosby Chemicals, Inc., DeRidder, La.
Dodge & Olcott Inc., 180 Varick St., N. Y.
E. I. du Pont de Nemours & Co., Wilmington, Del.
Felton Chemical Co., 603 Johnson Ave., Brooklyn, N. Y.
Firmenich & Co., 250 W. 18th St., N. Y.
Benj. French, Inc., 160 Fifth Ave., N. Y.
General Drug Co., 644 Pacific St., Brooklyn
Givaudan-Delawanna, Inc., 330 W. 42nd St., N. Y.
Magnus, Mabree & Reynard, 16 Desbrosses St., N. Y.
Schimmel & Co., 601 W. 26th St., N. Y.
Ungerer & Co., 161 Sixth Ave., N. Y.

TETRACHLORETHYLENE (see Solvents, Organic)

TETRASODIUM PYROPHOSPHATE

American Cyanamid & Chem. Corp., 30 Rockefeller Plaza, N. Y.
Blockson Chemical Co., Joliet, Ill.
General Chemical Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y. 6

TETRASODIUM PYROPHOSPHATE (Contd.)

E. I. du Pont de Nemours & Co., Wilmington, Del.
General Chemical Co., 40 Rector St., N. Y.
A. R. Maas Chem. Co., South Gate, Calif.
Monsanto Chemical Co., 1700 S. 2nd St., St. Louis
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Philipp Bros., 37 Wall St., N. Y.
Victor Chem. Wks., 141 W. Jackson Blvd., Chicago
Welch, Holme & Clark Co., 439 West St., N. Y.
Westvaco Chlorine Prods. Co., 405 Lexington Ave., N. Y.

TEXTILE SOAPS

Alrose Chem. Co., Box 1294, Providence, R. I.
American Soap & Washoline Co., Cohoes, N. Y.
Armour Soap Wks., 1355 W. 31st St., Chicago
Beach Soap Co., Lawrence, Mass.
Carlstadt Chem. Co., Carlstadt, N. J.
Chemical Mfg. & Dist. Co., Easton, Pa.
Chem. Service Co. of Balto., Howard & West Sts., Balto.
Clifton Chemical Co., 62 William St., N. Y.
Colgate-Palmolive-Peet Co., Jersey City, N. J.
Delta Chem. Co., 4 Payson Ave., N. Y.
J. O. Draper Co., Pawtucket, R. I.
E. I. du Pont de Nemours Co., Wilmington, Del.
Eagle Soap Corp., Huntington, Ind.
J. Eavenson & Sons, Del. & Penn. Sts., Camden, N. J.
Enterprise Mill Soap Wks., 2231 N. 12th St., Philadelphia
Haag Labs., 140th & Seelye Ave., Blue Island, Ill.
Hockwald Chem. Co., 135 Mississippi St., San Francisco
Arnold Hoffman & Co., Providence, R. I.
Hysan Prods. Co., 932 W. 38th Place, Chicago
Iowa Soap Co., 810 Valley St., Burlington, Ia.
H. Kohnstamm & Co., 91 Park Pl., N. Y.
Laurel Soap Mfg. Co., Tioga St., Phila.
Long Island Soap Co., Meeker Ave. & Bridgewater St.,
Brooklyn, N. Y.
Los Angeles Soap Co., Los Angeles, Cal.
M. Michel & Co., 90 Broad St., N. Y.
Miranol Chemical Co., P.O. Box 118, Milltown, N. J.
Nopco Chem. Co., Harrison, N. J.
National Soap Co., 357 South 26th St., Tacoma, Wash.
Newell Gutrad & Co., 350 Fremont St., San Francisco
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Procter & Gamble Co., Cincinnati
Puritan Soap Co., 573 Lyell Ave., Rochester, N. Y.
Rome Soap Mfg. Co., Rome, N. Y.
Sandoz Chemical Works, 61 Van Dam St., N. Y.
Sanitary Soap Co., 104 Railroad Ave., Paterson, N. J.
Scholler Bros., 3301 Amber St., Philadelphia
Seaboard Distributors, 60 Park Pl., Newark, N. J.
Geo. E. Sherman Co., 153 Classon Ave., Brooklyn, N. Y.
L. Sonneborn Sons, 88 Lexington Ave., N. Y.
John T. Stanley Co., 642 W. 30th St., N. Y.
Superior Soap Corp., 121 Nostrand Ave., Brooklyn
Swift & Co., Union Stock Yards, Chicago
Texas Soap Mfg. Corp., 4905 Calhoun Rd., Houston
Ultra Chem. Wks., Inc., 2 Wood St., Paterson, N. J.
Warren Soap Mfg. Co., 51 Waverly St., Cambridge, Mass.
Warwick Chem. Co., West Warwick, R. I.
M. Werk Co., St. Bernard, Cincinnati
Jacques Wolf & Co., Passaic, N. J.
G. H. Wood & Co., Toronto, Ont., Canada
Chas. W. Young & Co., 1247 N. 26th St., Phila.

TEXTILE SODA (see Soda)

TEXTILE SPECIALTIES (Oils, softeners, etc.)

Alrose Chem. Co., Box 1294, Providence, R. I.
American Cyanamid & Chem. Corp., 30 Rockefeller
Plaza, N. Y.
Atlas Powder Co., Wilmington, Del.
Borne Scrymner Co., 632 S. Front St., Elizabeth, N. J.
Carbide & Carbon Chem. Corp., 30 E. 42nd St., N. Y.
Carlstadt Chem. Co., Carlstadt, N. J.
Commercial Solvents Corp., 17 E. 42nd St., N. Y.
Cowles Detergent Co., 7016 Euclid Ave., Cleveland
J. O. Draper Co., Pawtucket, R. I.
E. I. du Pont de Nemours Co., Wilmington, Del.
Emery Industries, Inc., Carew Tower, Cincinnati

Emulsol Corp., 59 E. Madison St., Chicago
Enterprise Mill Soap Wks., 2231 N. 12th St., Philadelphia
Franklin Research Co., 5134 Lancaster Ave., Phila.
Geigy Co., 89 Barclay St., New York
General Dyestuff Corp., 435 Hudson St., N. Y.
Glyco Products Co., 26 Court St., Bklyn., N. Y.
W. C. Hardesty Co., 41 E. 42nd St., N. Y.
Hercules Powder Co., Wilmington, Del.
Arnold Hoffman & Co., Providence, R. I.
Laurel Soap Mfg. Co., Tioga St., Phila., Pa.
M. Michel & Co., 90 Broad St., N. Y.
Miranol Chemical Co., P.O. Box 118, Milltown, N. J.
Naphthole, Inc., 15 E. 26th St., N. Y.
National Aniline Div., Allied Chem. & Dye Corp., 40
Rector St., N. Y.
Nopco Chem. Co., Harrison, N. J.
National Soap Co., 357 South 26th St., Tacoma, Wash.
National Starch Prods. Co., 820 Greenwich St., N. Y.
Pennsylvania Refining Co., Butler, Pa.
Rumford Chem. Works, Rumford, R. I.
Sandoz Chemical Works, 61 Van Dam St., N. Y.
Scholler Bros., 3301 Amber St., Philadelphia
Seaboard Distributors, 60 Park Pl., Newark, N. J.
Geo. E. Sherman Co., 153 Classon Ave., Brooklyn, N. Y.
Skotch Prods. Corp., 2710 Detroit Ave., Cleveland
L. Sonneborn Sons, 88 Lexington Ave., N. Y.
Ultra Chem. Works, Inc., 2 Wood St., Paterson, N. J.
Washine-National-Sands, Inc., 37-02 Northern Blvd.,
Long Island City
Warwick Chem. Co., West Warwick, R. I.
Woburn Chemical Corp., Harrison, N. J.
Jacques Wolf & Co., Passaic, N. J.
Chas. W. Young & Co., 1247 N. 26th St., Phila.

THALLIUM SULFATE

Foot Mineral Co., 1609 Summer St., Phila.
Merck & Co., Rahway, N. J.
Pfaltz & Bauer, Inc., 350-5th Ave., N. Y.
Rosenthal Bercow Co., 25 E. 26th St., N. Y.

THEATRE SPRAYS

Albert Albek, Inc., 515 S. Fairfax Ave., Los Angeles
Antiseptol Co., 5524 Northwest Highway, Chicago
Associated Chemists Inc., 1906 N. Halsted, Chicago
Banner Chemical Prod. Corp., 60 Elm St., Newark, N. J.
Baums Castorine Co., 200 Mathew St., Rome, N. Y.
Brilco Labs., 947-61st., Bklyn.
Cenol Co., 4250 Pulaski Ave., Chicago
Chemical Compounding Corp., 262 Huron St., Brooklyn
Chemical Mfg. & Dist. Co., Easton, Pa.
Chem. Service Co. of Balto., Howard & West Sts., Balto.
Chemical Supply Co., Plymouth Bldg., Cleveland
Chicago Sanitary Prods. Co., 3100 Throop St., Chicago
Churchill Mfg. Co., Galesburg, Ill.
Clifton Chemical Co., 62 William St., N. Y.
Delta Chem. Co., 4 Payson Ave., N. Y.
Eagle Soap Corp., Huntington, Ind.
Elkay Products Corp., 323 W. 16th St., N. Y.
Fuld Bros., 702 S. Wolfe St., Baltimore
James Good, Inc., Kensington, Phila.
Higley Chemical Co., Dubuque, Iowa
Hockwald Chemical Co., 135 Mississippi St., San Francisco
Hunt Mfg. Co., Lisbon Rd., Cleveland
Hysan Prods. Co., 932 W. 38th Place, Chicago
Imperial Prods. Co., 1600 Fountain St., Phila.
Jansen Soap & Chemical Co., 324 Leavenworth St., San
Francisco, Cal.
Lewis Soap & Chem. Co., Oakland, Cal.
Lorenz Chemical Co., 135 N. 32nd Ave., Omaha
Midland Labs., Dubuque, Ia.
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Perry Bros., Inc., 220 Flushing Ave., Brooklyn
Theo. B. Robertson Prods. Co., 700 W. Division St.,
Chicago
Rochester Sanitary Prods. Co., 874 Seward St.,
Rochester, N. Y.
Selig Co., 336 Marietta St., Atlanta, Ga.
E. B. Snyder Labs., 2137 E. Harold St., Philadelphia
Tech Soap Co., 125 W. 46th Pl., Chicago
Tesco Chem. Co., P. O. Box 4748, Atlanta

THEATRE SPRAYS (Contd.)

Texas Soap Mfg. Corp., 4905 Calhoun Rd., Houston
Texol Chem. Wks., 3 Winter St., Worcester, Mass.
J. A. Tumbler Labs., 423 Hanover St., Hanover
Uncle Sam Chemical Co., 573 W. 131st St., N. Y. C.
U. S. Sanitary Specialties Corp., 435 S. Western Ave., Chicago
Victory Chem. Co., 148 Fairmount Ave., Phila.
G. H. Wood & Co., Toronto, Ont., Canada
World Spray Co., Inc., 5117 Central Ave., Los Angeles
York Chemical Co., 23 Dean St., Bklyn.

THERMOMETERS (see Instruments)

THYME OIL (see Essential Oils)

THYMOL (see Aromatic Chemicals)

TIGHT WRAPPING MACHINERY (see Wrapping Machinery)

TIN CRYSTALS (Stannous Chloride)

American Cyanamid & Chem. Corp., 30 Rockefeller Plaza, N. Y.
J. T. Baker Chem. Co., Phillipsburg, N. J.
E. I. du Pont de Nemours & Co., Wilmington, Del.
General Chemical Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Metal & Thermit Corp., 120 Broadway, N. Y.

TITANIUM OXIDE (for toilet soaps)

Chemical & Pigment Co., St. Helena, Baltimore
E. I. du Pont de Nemours Co., Wilmington, Del.
Foote Mineral Co., 1609 Summer St., Phila.
Titanium Pigment Co., 111 Broadway, N. Y.
R. T. Vanderbilt Co., 230 Park Ave., N. Y.
Whittaker, Clark & Daniels, 260 W. Bdway., N. Y.
Witco Chemical Co., 295 Madison Ave., N. Y.

TOILET PAPER

Brown Co., Portland, Me.
Hoberg Paper & Fibre Co., Green Bay, Wisc.
Scott Paper Co., Chester, Pa.
Straubel Paper Co., Green Bay, Wis.
U. S. Envelope Co., Lititz, Pa.
Victoria Paper Mills Co., Fulton, N. Y.

TOILET PREPARATIONS (Private Label)

(see also Bath Salts, Shampoos, etc.)

Allied Products, Inc., Suffern, N. Y.
Corn King Co., Cedar Rapids, Ia.
R. Gesell, Inc., 200 W. Houston St., N. Y.
Lightfoot Schultz Co., 1412 Park Ave., Hoboken, N. J.
Perry Bros., Inc., 220 Flushing Ave., Brooklyn
Richards Sales Corp., Warren & Morris Sts., Jersey City, N. J.
Schmidt Soap Products Co., 236 W. North Ave., Chicago
Shores Co., Cedar Rapids, Ia.
John T. Stanley Co., 642 W. 30th St., N. Y.
G. H. Wood & Co., Toronto, Ont., Canada
Allen B. Wrisley Co., 6801 W. 65th St., Chicago

TOILET SEAT COVERS

Lorco Industries, Clarke & Horner Sts., Cincinnati
Morton Mfg. Co., 5105 W. Lake St., Chicago
National Towel Bendon Ltd., 12 Stewart St., San Francisco
Sani-Gard Cover Co., 411 W. 5th St., Los Angeles

TOILET SOAP BASE (for Cakes)

Armour Soap Wks., 1355 W. 31st St., Chicago
Colgate-Palmolive-Peet Co., Jersey City, N. J.

Hewitt Soap Co., Dayton, O.
Los Angeles Soap Co., Los Angeles, Cal.
Nopeco Chem. Co., Harrison, N. J.
Peck's Products, 610 E. Clarence Ave., St. Louis
Procter & Gamble Co., Cincinnati
Schmidt Soap Products Co., 236 W. North Ave., Chicago
Swift & Co., Chicago
John T. Stanley Co., 642 W. 30th St., N. Y.
Allen B. Wrisley Co., 6801 W. 65th St., Chicago

TOILET SOAP MILLS (see Soap Machinery)

TOILET SOAPS (Private Label)

Armour Soap Wks., 1355 W. 31st St., Chicago
Arrow Laboratories, 236 W. North Ave., Chicago
Baum's Castorine Co., Rome, N. Y.
Colgate-Palmolive-Peet Co., Jersey City, N. J.
Cudahy Packing Co., 221 N. LaSalle St., Chicago
J. Eavenson & Sons, Del & Penn Sts., Camden, N. J.
James Good Co., Susquehanna Ave. & Martha St., Phila.
The Haag Lab., Inc., P.O. Box 114, Blue Island, Ill.
Hewitt Soap Co., Dayton, O.
Long Island Soap Co., 29 Bridgewater St., Brooklyn
Lightfoot Schultz Co., 1412 Park Ave., Hoboken, N. J.
Los Angeles Soap Co., Los Angeles, Cal.
National Soap Co., Box 1613, Tacoma, Wash.
Newell, Gutradt Co., 350 Fremont St., San Francisco
North Coast Soap & Chem. Wks., Seattle, Wash.
Peck's Products, 610 E. Clarence Ave., St. Louis
Procter & Gamble, Cincinnati
Schmidt Soap Products Co., 236 W. North Ave., Chicago
John T. Stanley Co., 642 W. 30th St., N. Y.
Swift & Co., Chicago
Vliet Soap Co., 638 Monroe St., Brooklyn
Warren Soap Mfg. Co., 51 Waverly St., Cambridge, Mass.
M. Werk Co., St. Bernard, Cincinnati
Wolf Creek Soap Co., Dayton, Ohio
Allen B. Wrisley Co., 6801 W. 65th St., Chicago

TOOTH PASTE (Private Label)

Corn King Co., Cedar Rapids, Ia.
R. Gesell, Inc., 200 W. Houston St., N. Y.
McKesson & Robbins, 3674 3rd Ave., N. Y.
Geo. A. Schmidt Co., 236 W. North Ave., Chicago
Strong Cobb & Co., Cleveland
Allen B. Wrisley Co., 6801 W. 65th St., Chicago

TOWELS, PAPER (see Paper Towels)

TRICHLORBENZENE (see Solvents, Organic)

TRICHLORETHYLENE (see Solvents, Organic)

TRIETHANOLAMINE

Carbide & Carbon Chemicals Corp., 30 E. 42nd St., N. Y.

TRIETHANOLAMINE SOAPS

Alrose Chem. Co., Box 1294, Providence, R. I.
Chem. Mfg. & Dist. Co., Easton, Pa.
Chem. Service Co. of Balto., Howard & Fast Sts., Balto.
Clifton Chemical Co., 62 William St., N. Y.
Crystal Soap & Chem. Co., 6300 State Rd., Philadelphia
Davies-Young Soap Co., Dayton, O.
Fuld Bros., Inc., 702 S. Wolfe St., Baltimore
James Good, Inc., 2116 E. Susquehanna Ave., Phila.
Griffin Chem. Co., 1000 16th St., San Francisco
Hysan Prods. Co., 932 W. 38th Place, Chicago
Kranich Soap Co., 60 Richards St., Bklyn.
Nopco Chem. Co., Harrison, N. J.
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Sanitary Soap Co., 104 Railroad Ave., Paterson, N. J.
E. B. Snyder Labs., 2137 E. Harold St., Philadelphia

NEW & REBUILT SOAP MACHINERY

**For Powdered, Liquid, Flake, Cake and Bar Soaps
INSECTICIDES, COSMETICS, CHEMICALS, ETC.**

LARGE STOCK IN OUR BROOKLYN WAREHOUSE

Proctor Automatic Soap Chip Belt Conveyor Dryers.
Proctor Truck & Tray Dryers, Atmos. & Vac.
Allbright-Nell 4'x9' Chilling Roll Units or Flakers.
Devine & Buffalo Vacuum Shelf Dryers.
Huber automatic 25-ton Para Block Press.
Jones Automatic Soap Presses.
Houchin Foot Presses.
Houchin 2, 3 & 4 Roll Granite Stone Mills.
Steel Roller Mills, 9"x24", 12"x30", 16"x40", 3 & 5 Rolls.
Soap Frames, with removable steel sides.
Soap Slabbers, hand & power operated.
Soap Cutting Tables.
Jacketed Soap Crutchers, 1000# to 4000#.
Automatic Top & Bottom Carton Sealing Machines & Compression Unit.
Houchin Plodders: 4", 6", 8" & 10".
No. 10-A and No. 14 Blanchard Mills.
Filter Presses: 6", 12", 18", 24", 30", 32", 36" & 42".
Sharples & DeLaval Centrifuges & Oil Separators.
Baker Perkins (W. & P.) Day, Ross & Read horiz. single and double Arm Mixers, up 250 gals.

Day, Stokes, Stokes & Smith Powder Fillers.
Day & Robinson Dry Mixers, 50 to 2500 lbs.
Standard Automatic "Samco" Jr. Vac. Bottle Filler.
New Stainless Steel Tanks, 50 to 5000 gals.
Stainless Steel, Copper, Alum. & Glass Lined Kettles & Tanks.
Jay Bee, Gruendler & William Hammer Mills & Raymond Pulverizers.
Pebble & Jar Mills, Lab to 500 gals.
Oil Expellers, Cookers, Roller Mills, & Hydr. Presses.
New Portable Electric Agitators, 1/4 to 2 HP.
New 40 gal. Pony Mixers.
Still, Atmospheric & Vacuum.
Crystallizing Roll Units, complete.
Glycerine Evaporators.
Ertel & Alsop Disc Filters.
Kiefer, U. S. Bottlers, Alsop & Ertel Liquid Fillers.
Rotary, Centrifugal & Vacuum Pumps.
Steam Jacketed Kettles up to 2000 gals.
Soap Boiling Kettles, jack. & with coils.
Storage Tanks, Steel & Wood.

ONLY PARTIAL LISTING—SEND FOR SPECIAL SOAP BULLETIN

WE BUY YOUR SURPLUS MACHINERY, FROM SINGLE ITEMS TO COMPLETE PLANTS.

STEIN EQUIPMENT COMPANY

90 WEST STREET
TEL. WORTH 2-5745

NEW YORK 6, N. Y.
Cable Address: MACHEQUIP

Soap Kettles
Crutchers
Houchin Plodders
Soap Presses
Granite Mills
Proctor & Schwartz
Dryers

New Steel Mixers
Day, Kent or Ross Pony
Mixers
Day Mixers and Sifters
Schutz-O'Neill Mills
Factory Handling Equipment

New York's
Largest Stock
of new and rebuilt

SOAP-

INSECTICIDE-

CHEMICAL EQUIPMENT

ST

Filling and Weighing Machines
Shriver and Sperry Filter Presses
Pulverizers for every purpose

Tanks, Kettles and Boilers
Packaging and Sealing Equipment
Three Roll Water-Cooled Mills

Fair Values Prices
Paid for Your
Surplus Equipment

FIRST MACHINERY CORP. 157 HUDSON ST., N. Y. 13, N. Y.

TRIPOLI (see Abrasives and Fillers)

TRISODIUM PHOSPHATE

(see also Brokers and Dealers)

E. I. du Pont de Nemours Co., Wilmington, Del.
Amer. Agricultural Chem. Co., 50 Church St., N. Y.
American Cyanamid & Chemical Corp., 30 Rockefeller Plaza, N. Y.
Blockson Chemical Co., Joliet, Ill.
E. I. du Pont de Nemours & Co., Wilmington, Del.
Emeryville Chem. Co., 405 Montgomery St., San Francisco
General Chemical Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
Harshaw Chemical Co., 1945 E. 97th St., Cleveland
Innis, Speiden & Co., 117 Liberty St., N. Y.
A. R. Maas Chem. Co., South Gate, Calif.
Monsanto Chemical Co., 1700 S. 2nd St., St. Louis
Philipp Bros., 37 Wall St., N. Y.
Chas. L. Read & Co., 120 Greenwich St., N. Y.
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Jos. Turner & Co., Ridgefield, N. J.
Victor Chemical Works, 141 W. Jackson Blvd., Chicago
Virginia-Carolina Chemical Corp., Richmond, Va.
Westvaco Chlorine Prods. Co., 405 Lexington Ave., N. Y.
Welch, Holme & Clark Co., 439 West St., N. Y.

TRUCKS (Portable)

American Car & Foundry Co., 30 Church St., N. Y.
J. H. Day Co., 1144 Harrison Ave., Cincinnati
Fairbanks, Morse & Co., 900 S. Wabash St., Chicago
Houchin Machinery Co., Hawthorne, N. J.
Huber Machine Co., 265 46th St., Brooklyn
G. B. Lewis Co., Watertown, Wis.
Self-Lifting Piano Truck Co., Findlay, Ohio
Stein Equipment Co., 90 West St., N. Y. (Used)

TUBE FILLING MACHINERY (see Filling Machinery, Tubes)

TUBES (Collapsible)

Aluminum Company of America, Gulf Bldg., Pittsburgh
Art Tube Co., Irvington, N. J.
Bond Penn Tube Co., 501 Monroe St., Wilmington, Del.
Consolidated Fruit Jar Co., New Brunswick, N. J.
Globe Collapsible Tube Corp., 28 Columbia Heights, Brooklyn, N. Y.
Hygienic Tube Co., 34 Ave. L., Newark, N. J. (Celluloid)
National Collapsible Tube Co., Providence, R. I.
New England Collapsible Tube Co., New London, Conn.
Peerless Tube Co., Bloomfield, N. J.
Sun Tube Corp., Hillside, N. J.
Victor Metal Products Corp., Brooklyn, N. Y.
White Metal Mfg. Co., 1012 Grand St., Hoboken, N. J.
Wilco Co., 6800 McKinley Ave., Los Angeles
A. H. Wirz, Inc., Chester, Pa.

TUBES, MAILING (see Cans, Fibre)

TUBES (Transparent Celluloid)

W. C. Ritchie & Co., 8801 S. Baltimore Ave., Chicago
Lusteroid Container Co., So. Orange, N. J.
Hygienic Tube Co., Newark, N. J.

TURPENTINE

Antwerp Naval Stores Co., Savannah, Ga.
E. W. Colledge, General Sales Agent, P. O. Box 389, Jacksonville, Fla.
Continental Turp. & Rosin Corp., Laurel, Miss.
Crosby Chemicals, Inc., DeRidder, La.
Dixie Pine Prods. Co., Hattiesburg, Miss. (wood)
Georgia Rosin Prods. Co., Brunswick, Ga.
Glidden Co., Naval Stores Div., P. O. Box 380, Jacksonville, Fla.
Hercules Powder Co., Wilmington, Del. (wood)
Industrial Chem. Sales Div., West Va., Pulp & Paper Co., 230 Park Ave., N. Y.

"Consolidated" USED & REBUILT SOAP MACHINERY



Soap Plodder



4-Roll Soap Mill



Perfection Crutcher



Pure Lard Press



Standard Soap Frame



Automatic Soap Press

• SPECIAL ITEMS •

- 3—Proctor and Schwartz Soap Chip Dryers, 5 fan, with 2-roll Cooling Rolls.
- 2—Soap Foot Presses.
- 1—Garrigue Single Effect Glycerine Evaporator, 1500# per hour.
- 20—1200 lb. Soap Frames, each with Truck.
- 1—Houchin 4" Plodder, motor driven.
- 2—1500# vertical jack. Soap Crutchers.
- 1—Houchin 4 roll water cooled Type F, Soap Mill.

Crutchers
Soap Kettles
Powder Mixers
Granite Mills
Plodders

Slobbers
Foot and Automatic
Soap Presses
Cutting Tables
Pulverizers

Soap Pumps
Soap Chippers
Filter Presses
Soap Frames

Powder Fillers
Labellers
Tanks
Boilers

WANTED YOUR IDLE MACHINERY
WE BUY FROM
SINGLE ITEMS TO COMPLETE PLANTS



THE KEY TO SAVING TIME AND MONEY

CONSOLIDATED
PRODUCTS COMPANY, INC.

15-21 PARK ROW — NEW YORK 7, N. Y.

TELEPHONE: Barclay 7-0600

CABLE ADDRESS: "EQUIPMENT"

ALRO SEQUESTRENE A

a polyamino carboxylic
acid salt

THE IDEAL SOAP ADDITIVE

Clarifies liquid soaps
inhibits turbidity in glass
enhances foam
retards rancidity
prevents lime soap formation
improves rinsing properties
inhibits deleterious effects of
copper, iron, manganese, nickel, etc.
stable in solution and at the boil



ALROSE CHEMICAL COMPANY

Manufacturing and Research Chemists
PROVIDENCE 1, R. I.

WETTING AGENTS • EMULSIFIERS • PENETRANTS
FOAMERS • DISPERSANTS • SOFTENERS
DETERGENTS • DEFOAMERS • SEQUESTRANTS
TEXTILE CHEMICALS • INDUSTRIAL SPECIALTIES

QUATERNARY AMMONIUM COMPOUNDS

Chemicals

FOR THE MANUFACTURE OF
**SOAP and
SANITARY
SPECIALTIES**

ACETONE

spotting fluids, dry-cleaning soaps

BUTANOL

mutual solvent

BUTYL "CARBITOL"

mutual solvent, dry-cleaning soaps

BUTYL "CELLOSOLVE"

mutual solvent, dry-cleaning soaps

"CARBITOL" AND "CELLOSOLVE"

mutual solvents

DICHLORETHYL ETHER

spotting compound

ISOPROPANOL AND ETHANOL

liquid soaps, antiseptics, polishes, disinfectants

ETHANOLAMINES, MONO-, DI-, AND TRI-

detergents, emulsifying agents

ETHYLENE DICHLORIDE

spotting and scouring compounds

MORPHOLINE AND ISOPROPANOLAMINES

emulsifying agents

PROPYLENE DICHLORIDE

cleaning and scouring compounds

"TERGITOL" WETTING AGENTS

spreading, wetting, and cleaning

These chemicals are representative of the products we supply for the manufacture of soaps and sanitary chemicals. For complete information on these or others of the 200 chemicals we produce write for our catalog, "Synthetic Organic Chemicals."



"Cellosolve," "Carbitol," and
"Tergitol" are trade-marks
of C&CCC

CARBIDE AND CARBON
CHEMICALS CORPORATION

Unit of Union Carbide and Carbon Corporation



30 East 42nd Street, New York 17, N. Y.
In Canada: Carbide and Carbon Chemicals, Ltd., Toronto 1

TURPENTINE (Contd.)

Newport Industries, Inc., 230 Park Ave., N. Y.
Phoenix Naval Stores Co., Gulfport, Miss (wood)
Chas. L. Read & Co., 120 Greenwich St., N. Y.
Taylor, Lowenstein & Co., Mobile, Ala.

URINAL BLOCKS (see Deodorizing Blocks)

USED MACHINERY AND EQUIPMENT

Allied Steel & Equipment Co., 1007 Springfield Ave.,
Irvington, N. J.
Brill Equipment Corp., 183 Varick St., N. Y.
Consolidated Prods. Co., 15 Park Row, N. Y.
Emaco Equipment Co., 39 Hyatt Ave., Newark, N. J.
J. L. Ferguson Co., Joliet, Ill.
Filter Paper Co., 2464 S. Michigan Ave., Chicago
First Machy. Corp., 157 Hudson St., N. Y.
Houchin Machinery Co., Hawthorne, N. J.
Huber Machine Co., 265 46th St., Brooklyn
J. M. Lehmann Co., Lyndhurst, N. J.
Machinery & Equipment Co., 533 W. Broadway, N. Y.
Newman Tallow & Soap Machy. Co., 1051 W. 35th St.,
Chicago
Prater Pulverizing Co., 1825 S. 55th Ave., Chicago
Stein Equipment Co., 90 West St., N. Y. (Used)
Weigh Right Automatic Scale Co., 404 Grant Ave.,
Joliet, Ill.

VACUUM CLEANERS (Heavy Duty)

Fay Co., 279 5th Ave., N. Y.
Hild Floor Machine Co., 1313 W. Randolph St., Chicago
H. D. Hudson Mfg. Co., 589 E. Illinois St., Chicago
Multi-Clean Prods., 2277 Ford Pkwy., St. Paul
Rex-Cleanwall Corp., Brazil, Ind.
Sprayer Corp. of America, 1712 Payne St., Evanston, Ill.

VANILLIN

(see also Essential Oils)

Aromatic Products, Inc., 15 E. 30th St., N. Y.
Dodge & Olcott Inc., 180 Varick St., N. Y.
E. I. du Pont de Nemours Co., Wilmington, Del.
Felton Chemical Co., 603 Johnson Ave., Brooklyn, N. Y.
Fies Bros., 90 Reade St., N. Y.
General Drug Co., 644 Pacific St., Brooklyn
Givaudan-Delawanna, Inc., 330 W. 42nd St., N. Y.
Magnus, Mabee & Reynard, 16 Desbrosses St., N. Y.
Maywood Chemical Co., Maywood, N. J.
Merck & Co., Rahway, N. J.
Monsanto Chemical Co., 1700 S. 2nd St., St. Louis, Mo.
Schimmel & Co., 601 W. 26th St., N. Y.
Verona Chemical Co., Verona Ave., Newark, N. J.

VENDING MACHINES

Acme Cotton Products Co., 245—5th Ave., N. Y.
(Sanitary Napkin)
Brown Co., Portland, Me. (Soap and Taper Towel)
Hospital Specialty Co., 41 Union Sq., N. Y. (Sanitary
Napkin)
Rochester Germicide Co., Rochester, N. Y. (Sanitary
Napkins)
U. S. Sanitary Specialties Corp., 435 S. Western Ave.,
Chicago

VETIVERT OIL (see Essential Oils)

VOLCANIC ASH (see Abrasives and Fillers)

WASHING MACHINERY (Bottles and Jars)

Allied Steel & Equipment Co., 1007 Springfield Ave.,
Irvington, N. J.
Alsop Engineering Corp., 103 Green St., Milldale, Conn.
Barry-Wehmiller Machinery Co., 4660 W. Florissant
Ave., St. Louis
Consolidated Prods. Co., 15 Park Row, N. Y. (Used)
Filter Paper Co., 2464 S. Mich. Ave., Chicago

First Machy. Corp., 157 Hudson St., N. Y. (Used)
Hornsey & Co., 420 Lexington Ave., N. Y.
Karl Kiefer Machine Co., 319 Ma. tin St., Cincinnati, O.
Newman Tallow & Soap Mach. Co., 1051 W. 35th,
Chicago (Used)
Stein Equipment Co., 90 West St., N. Y. (Used)
F. J. Stokes Mach. Co., Philadelphia, Pa.
U. S. Bottlers Machinery Co., 4025 N. Rockwell St.,
Chicago
Weigh Rite Automatic Scale Co., Joliet, Ill.

WASHING MACHINERY (For cleaning drums and barrels)

Allied Steel & Equipment Co., 1007 Springfield Ave.,
Irvington, N. J.
F. Aue & Co., 171 Beebe Ave., Long Island City, N. Y.
Eureka Machine Co., 2061 Vega Ave., Cleveland
Charles E. Farrington, Phoenixville, Pa.
Harnischfeger Corp., 4400 W. National Ave., Milwaukee
Vol-U-Meter Co., 707 Ohio St., Buffalo

WASHING POWDERS (see Cleaning Compounds)

WASTE RECEPTACLES (see Pails, Steel)

WATER CONDITIONING EQUIPMENT

Permutit Co., 330 W. 42nd St., N. Y.

WATER GLASS (see Sodium Silicate)

WATER SOFTENERS

Alrose Chem. Co., Box 1294, Providence, R. I.
Allied Industrial Prods. Co., 620 N. Michigan, Chicago
Amer. Agricultural Chem. Co., 50 Church St., N. Y.
American Cyanamid & Chemical Corp., 30 Rockefeller
Plaza, N. Y.
American Doucil Co., 125 S. 3rd St., Philadelphia
Antara Prods. Div., Gen. Aniline & Film Corp., 444
Madison Ave., N. Y.
Baum's Castorine Co., Rome, N. Y.
Blockson Chemical Co., Joliet, Ill.
Carbide & Carbon Chem. Corp., 30 E. 42nd St., N. Y.
Chemical Mfg. & Dist. Co., Easton, Pa.
Corn King Co., Cedar Rapids, Ia.
Filter Paper Co., 2464 S. Michigan Ave., Chicago
Gaylord Chem. Co., 701 Woodswether Rd., Kansas City
General Drug Co., 644 Pacific St., Brooklyn
General Dyestuff Corp., 435 Hudson St., N. Y.
Hubman Supply Co., 225 N. 4th St., Columbus, O.
Jansen Soap & Chemical Co., 324 Leavenworth St., San
Francisco, Calif.
A. R. Maas Chem. Co., South Gate, Calif.
Kemiko Mfg. Co., 500 Chancellor Ave., Irvington, N. J.
Mathieson Chemical Co., 60 E. 42nd St., N. Y.
Miranol Chem. Co., P. O. Box 118, Milltown, N. J.
Monsanto Chem. Co., 1700 S. 2nd St., St. Louis
Permutit Co., 330 W. 42nd St., N. Y.
Pittsburgh Plate Glass Co., Grant Bldg., Pittsburgh
Port Huron Detergent Co., Port Huron, Mich.
Procter & Gamble Co., Cincinnati
Richards Sales Corp., Jersey City, N. J.
Theo. B. Robertson Prods. Co., 700 W. Division St.,
Chicago
Rumford Chem. Works, Rumford, R. I.
Shores Co., Cedar Rapids, Ia.
Skotch Prods. Corp., 2710 Detroit Ave., Cleveland
E. B. Snyder Labs., 2137 E. Harold St., Philadelphia
Solvay Sales Div., Allied Chem. & Dye Corp., 40 Rector
St., N. Y.
Westvaco Chlorine Prods. Co., 405 Lexington Ave., N. Y.

WATER STILLS (Automatic)

International Filter Co., 325 W. 25th Pl., Chicago
F. J. Stokes Machine Co., Tabor Rd., Phila., Pa.

PETROLEUM WAXES

INDRALATUM*

VELATRUM*

PARALATRUM*

*Registered Trademarks

SLACK WAXES

FULLY REFINED PARAFFIN WAX

WHITE CRUDE SCALE PARAFFIN WAX

MICROCRYSTALLINE WAXES

of all types—in solid or powder form

DOMESTIC CERESINES and OZOKERITES

INDRAWET DETERGENT

PETROLEUM DERIVATIVES and SPECIALTIES

ASPHALT

INDUSTRIAL RAW MATERIALS CORP.

52 WALL STREET, NEW YORK 5, N. Y. Dlgy 4-1500

WAX APPLICATORS (see Applicators)

WAXES (Carnauba, Candelilla, Montan, etc. Do not confuse with floor wax)

Allied Asphalt & Mineral Corp., 217 Broadway, N. Y.
American Cyanamid & Chemical Corp., 30 Rockefeller Plaza, N. Y.

Avon Trading Co., 401 Bdway., N. Y.
Borne Scrymser Co., 632 S. Front St., Elizabeth, N. J.
E. A. Bromund Co., 256 Broadway, N. Y.
Carbide & Carbon Chemicals Corp., 30 E. 42nd St., N. Y.
Concord Chem. Co., Independence Sq., Phila.
T. G. Cooper & Co., Cedar & Venango Sts., Phila.
Cornelius Prods. Co., 432 4th Ave., N. Y.
Wm. Diehl & Co., 336 W. 42nd St., N. Y. 18
Distributing & Trading Co., 444 Madison Ave., N. Y.
A. C. Drury & Co., 219 East North Water St., Chicago
Industrial Raw Materials Corp., 52 Wall St., N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
International Wax Refining Co., 4415—3rd Ave., B'klyn
W. & A. Leaman, 17 State St., N. Y.
Lenape Trading Co., 233 Broadway, N. Y.
George H. Lincks, 155 John St., N. Y.
Muench-Kreuzer Candle Co., Syracuse, N. Y.
Orbis Products Corp., 215 Pearl St., N. Y.
S. B. Penick & Co., 50 Church St., N. Y.
Petro-lite Corp., Ltd., 30 Broad St., N. Y.
R. J. Prentiss & Co., 110 William St., N. Y.
R. F. Revson Co., 144 W. 18th St., N. Y.
James H. Rhodes & Co., 157 W. Hubbard St., Chicago
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Frank B. Ross Co., 507—8th St., Hoboken, N. J.
L. A. Salomon & Bro., 216 Pearl St., N. Y.
William H. Scheel, Inc., 38 Franklin St., Bklyn.
Standard Oil Co., (Calif.), 225 Bush St., San Francisco
A. E. Starkie, 5461 W. Division St., Chicago
F. W. Steadman Co., 59 Pearl St., N. Y.
Strahl & Pitsch, 141 Front St., N. Y.

Strohmeyer & Arpe, 139 Franklin St., N. Y.
Twin City Shellac Co., 340 Flushing Ave., Brooklyn
Warwick Chem. Co., W. Warwick, R. I.
Will & Baumer Candle Co., Syracuse, N. Y.
G. S. Ziegler & Co., 233 Bdway, N. Y.

WAXES, Floor and Polishing (see Floor Waxes)

WAXES, Synthetic

Allied Asphalt & Mineral Corp., 217 Broadway, N. Y.
Armour Chem. Div., Armour & Co., 1355 W. 31st St., Chicago
Atlas Powder Co., Wilmington, Del.
Avon Trading Co., 401 Bdway., N. Y.
Bakelite Corp., 30 E. 42nd St., N. Y.
Carlstadt Chem. Co., Carlstadt, N. J.
Carbide & Carbon Chemicals Corp., 30 E. 42nd St., N. Y.
Concord Chem. Co., Independence Sq., Phila.
T. G. Cooper & Co., Cedar & Venango Sts., Phila.
Cornelius Prods. Co., 386 4th Ave., N. Y.
Wm. Diehl & Co., 336 W. 42nd St., N. Y. 18
E. I. du Pont de Nemours Co., Wilmington, Del.
General Dyestuffs Corp., 435 Hudson St., N. Y.
Glyco Products Co., 26 Court St., Bklyn., N. Y.
W. C. Hardesty Co., 41 E. 42nd St., N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
International Wax Refining Co., 4415—3rd Ave., B'klyn
Monsanto Chem. Co., 1700 S. 2nd St., St. Louis
Nopco Chem. Co., Harrison, N. J.
Oil States Pet. Co., 233 Broadway, N. Y.
Petro-lite Corp., Ltd., 30 Broad St., N. Y.
Pennotex Oil Corp., 29 Broadway, N. Y.
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Wm. H. Scheel, Inc., 38 Franklin St., Bklyn., 22
Sherwood Refining Co., Englewood, N. J.
F. W. Steadman Co., 59 Pearl St., N. Y.

C. V. WAX "A"

(Replaces Carnauba)

DOMESTIC CERESINE

DOMESTIC OZOKERITE

PARAFFIN WAX

Write us for
Quotations

F. W. STEADMAN COMPANY

59-61 Pearl Street New York 4

Waxes of Every Description

SALES AGENTS

N. S. Wilson & Sons
150 Causeway St., Boston
Clifford L. Iorns Co.
216 S. 74th St., St. Louis

R. Peltz Co.
Suite 995, Drexel Bldg.
5th and Chestnut Streets
Philadelphia 6, Penna.

Arthur C. Trask Co.
4103 S. LaSalle St., Chicago
L. R. Cross
Syracuse, N. Y.

John A. Hughes
916 W. 33rd St.
Los Angeles, Calif.

WAXES BUY ZIEGLER

The LATEST in NEW WAX — MANUFACTURING
FACILITIES permits us to offer on a highly competi-
tive basis — QUALITY-WISE and PRICE-WISE:

• • • ZECO WAXES • • •

OXIDIZED MICROCRYSTALLINE
SYNTHETIC HARD WAXES
CERESINES
MATCH WAXES
CANDLE WAXES
CABLE-INSULATION WAXES
STRAIGHT MICROCRYSTALLINE
CARBON PAPER WAXES
OZOKERITES
EMULSION WAX
SCALE WAXES
JAPAN WAX-REPLACEMENTS
PARAFFINE EXTENDERS
ALL NATURAL WAXES

Address Inquiries to
H. W. KRAAZ
Manager—Wax Division
Worth 4-8383

G. S. ZIEGLER & COMPANY

WOOLWORTH BLDG.
233 BROADWAY
NEW YORK 7, N. Y.



FACTORY:
NEW MARKET
NEW JERSEY

WAXES, SYNTHETIC (Contd.)

Strahl & Pitsch, 141 Front St., N. Y.
Van Dyk & Co., Belleville, N. J.
Warwick Chemical Co., 580 5th Ave., N. Y.
G. S. Ziegler & Co. 233 Broadway, New York

WEED KILLERS (2, 4-D, etc.)

American Chem. Paint Co., Ambler, Pa.
J. T. Baker Chemical Co., Phillipsburg, N. J.
Chem. Service Co. of Balto., Howard & West Sts., Balto.
Chipman Chem. Co., Bound Brook, N. J.
Crystal Soap & Chem. Co., 6300 State Rd., Philadelphia
Dow Chemical Co., Midland, Mich.
E. I. du Pont de Nemours & Co., Wilmington, Del.
Fuld Bros., 702 S. Wolfe St., Baltimore
General Chem. Div., Allied Chem. & Dye Corp., 40
Rector St., N. Y.
James Good Co., Susquehanna Ave. & Martha St., Phila.
Goulard & Olena, 140 Liberty St., N. Y.
Imperial Prods. Co., 1600 Fountain St., Phila.
J. F. Kerns Chem. Prods., 2239 S. Michigan Ave.,
Chicago
Kolker Chemical Works, 80 Lister Ave., Newark 5, N. J.
Koppers Co., Pittsburgh
Monsanto Chemical Co., 1700 S. 2nd St., St. Louis
Penn Salt Mfg. Co., Widener Bldg., Phila.
James Varley & Sons, 1200 Switzer Ave., St. Louis
York Chemical Co., 23 Dean St., Bklyn.

WEIGHING EQUIPMENT (Automatic)

J. L. Ferguson Co., Joliet, Ill.
B. F. Gump Co., 412 S. Clinton St., Chicago
S. Howe Co., Silver Creek, N. Y.
Johnson Automatic Sealer Co., Ltd., Battle Creek, Mich.
Pneumatic Scale Corp., North Quincy, Mass.
Read Machy. Co., York, Pa.
Stein Equipment Co., 90 West St., N. Y. (Used)
F. J. Stokes Machine Co., Phila., Pa.
Stokes & Smith Co., 4915 Summerdale Ave., Phila.
Triangle Package Machinery Co., 906 N. Spaulding Ave.,
Chicago
Vol-U-Meter Co., 710 Ohio St., Buffalo, N. Y.
Weigh Right Automatic Scale Co., Joliet, Ill.

WETTING AGENTS (see also Detergents, Synthetic, and Sulfonated Oils)

Alrose Chem. Co., Box 1294, Providence, R. I.
American Cyanamid & Chemical Corp., 30 Rockefeller
Plaza, N. Y.
Antara Prods. Div., Gen. Aniline & Film Corp., 444
Madison Ave., N. Y.
Armour & Co., 1355 W. 31st St., Chicago
Atlantic Refining Co., 260 S. Broad St., Philadelphia
Atlas Powder Co., Wilmington
Borne Scrymser Co., 632 S. Front St., Elizabeth, N. J.
Carbide & Carbon Chemicals Corp., 30 E. 42nd St., N. Y.
Carlstadt Chem. Co., Carlstadt, N. J.
Chem. Mfg. & Dist. Co., Easton, Pa.
E. I. du Pont de Nemours Co., Wilmington, Del.
Emery Industries, 4300 Carew Tower, Cincinnati
Emulsol Corp., 59 E. Madison Ave., Chicago
Gaylord Chem. Co., 701 Woodswether Rd., Kansas City
General Dyestuff Corp., 435 Hudson St., N. Y.
Griffin Chem. Co., 1000 16th St., San Francisco
W. C. Hardesty Co., 41 E. 42nd St., N. Y.
Hercules Powder Co., Wilmington, Del.
Imperial Prods. Co., 1600 Fountain St., Phila.
Maywood Chem. Wks., Maywood, N. J.
M. Michel & Co., 90 Broad St., N. Y.
Miranol Chem. Co., P. O. Box 118, Milltown, N. J.
Monsanto Chemical Co., 1700 S. 2nd St., St. Louis
National Aniline Div., Allied Chem. & Dye Corp., 40
Rector St., N. Y.
Nopco Chem. Co., Harrison, N. J.
Oronite Chem. Co., 200 Bush St., San Francisco
Procter & Gamble Co., Cincinnati
Publicker Industries, 1429 Walnut St., Phila.
Richards Sales Corp., Jersey City, N. J.

WETTING AGENTS (Contd.)

Robinson Wagner Co., 110 E. 42nd St., N. Y.
Rohm & Haas Co., 222 W. Washington Sq., Phila.
E. B. Snyder Labs., 2137 E. Harold St., Philadelphia
Sharples Chemicals, Inc., 1235 Broad St., Phila.
Solvay Sales Div., Allied Chem. & Dye Corp., 40 Rector St., N. Y.
L. Sonneborn Sons, 88 Lexington Ave., N. Y.
Stanco Distributors, Inc., 216 W. 14th St., N. Y.
Ultra Chemical Works, 2 Wood St., Paterson, N. J.
Van Dyk & Co., Belleville, N. J.
Victor Chem. Works, 141 W. Jackson Blvd., Chicago
Jacques Wolfe & Co., Passaic, N. J.

WHALE OIL

(see also *Brokers and Dealers*)

F. A. Marsily & Co., 15 Whitehall St., N. Y.
Murray Oil Prods. Co., 21 West St., N. Y.
J. H. Redding Co., 17 Battery Pl., N. Y.
Werner G. Smith Co., 2191 W. 110th St., Cleveland
Arthur C. Trask Co., 4103 S. LaSalle St., Chicago
Welch, Holme & Clark, Inc., 439 West St., N. Y.
Wilbur-Ellis Co., 17 Battery Pl., N. Y.

WHALE OIL SOAPS

(see also *Fish Oil Soaps*)

Crystal Soap & Chem. Co., 6300 State Rd., Philadelphia
James Good, Inc., 2116 E. Susquehanna Ave., Phila.
Hockwald Chem. Co., 135 Mississippi St., San Francisco
Nopco Chem. Co., Harrison, N. J.
Newell, Gutradt Co., 350 Fremont St., San Francisco
National Soap Co., Box 1613, Tacoma, Wash.
North Coast Chemical & Soap Works, Seattle, Wash.
Peck's Prods. Co., 610 E. Clarence Ave., St. Louis
Procter & Gamble Co., Cincinnati
Theo. B. Robertson Prods. Co., 700 W. Division St., Chicago
Werner G. Smith Co., 2191 W. 110th St., Cleveland

WHITE MINERAL OILS

Atlantic Refining Co., 260 S. Broad St., Philadelphia
Oil States Pet. Co., 233 Broadway, N. Y.
Pennsylvania Refining Co., Butler, Pa.
Petroleum Specialties, Inc., 400 Madison Ave., N. Y.
Chas. L. Read & Co., 120 Greenwich St., N. Y.
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
Sherwood Refining Co., Englewood, N. J.
Werner G. Smith Co., 2191 W. 110th St., Cleveland
L. Sonneborn Sons, 88 Lexington Ave., N. Y.
Stanco Distributors, Inc., 216 W. 14th St., N. Y.
Standard Oil Co., (Calif.), 225 Bush St., San Francisco
Standard Oil Co. (Ind.), 910 S. Michigan Ave., Chicago
F. W. Steadman Co., 59 Pearl St., N. Y.

WHITING (see TALC)

WINDSHIELD CLEANERS, (see Glass and Windshield Cleaners)

WOOD FLOUR

Becker Moore & Co., N. Tonawanda, N. Y.
Innis, Speiden & Co., 117 Liberty St., N. Y.
D. H. Litter Co., 242 W. 55th St., N. Y.
Frank Miller & Sons, 2250 W. 58th St., Chicago
Natl. Sawdust Co., 69 N. 6th St., Bklyn.
Witco Chemical Co., 295 Madison Ave., N. Y.
Wood Flour, Inc., Winchester, N. H.

WOOL GREASE (see Lanolin)

WRAPPING MACHINERY

Allied Steel & Equipt. Co., 1007 Springfield Ave., Irvington, N. J.
Consolidated Products Co., 15 Park Row, N. Y. (Used)
J. L. Ferguson Co., Joliet, Ill.
First Machy. Corp., 157 Hudson St., N. Y. (Used)
Johnson Automatic Sealer Co., Battle Creek, Mich.
J. M. Lehmann Co., Lyndhurst, N. J.
Miller Wrapping & Sealing Mach. Co., 16 S. Clinton St. Chicago
Newman Tallow & Soap Mach. Co., 1051 W. 35th St. Chicago (Used)
Package Machinery Co., Springfield, Mass.
Pneumatic Scale Corp., North Quincy, Mass.
F. B. Redington Co., 112 S. Sangamon St., Chicago
A. H. Ross & Co., P. O. Box 998, Dayton, O.
Stein Equipment Co., 90 West St., N. Y. (Used)
Stokes & Smith Co., 4915 Summerdale Ave., Phila.
Aurelio Tanzi Engineering Co., 430 Jefferson St., Bklyn.

ZINC NAPHTHENATE

Baker & Collinson, Detroit
Cuprinol Inc., 7 Water St., Boston
General Petroleum Corp of Calif., 108 W. 2nd St., Los Angeles
Harshaw Chemical Co., 1945 E. 97th St., Cleveland
Nuodex Products Co., 312 Division St., Elizabeth, N. J.

ZINC OXIDE

American Cyanamid & Chemical Corp., 80 Rockefeller Plaza, N. Y.
Anaconda Sales Co., E. Chicago, Ind.
J. T. Baker Chem. Co., Phillipsburg, N. J.
Chas. B. Chrystal Co., 53 Park Pl., N. Y.
E. I. du Pont de Nemours Co., Wilmington, Del.
Eagle-Picher Lead Co., 134 N. LaSalle St., Chicago
Harshaw Chem. Co., Cleveland
Innis, Speiden & Co., 117 Liberty St., N. Y.
Mallinckrodt Chemical Works, St. Louis, Mo.
Merck & Co., Rahway, N. J.
Monsanto Chemical Co., 1700 S. 2nd St., St. Louis
New Jersey Zinc Co., 160 Front St., N. Y.
Orbis Products Corp., 215 Pearl St., N. Y.
Rohm & Haas Co., 222 W. Washington Sq., Phila.
Rosenthal-Bercow Co., 25 E. 26th St., N. Y.
L. A. Salomon & Bro., 216 Pearl St., N. Y.
Western Zinc Oxide Co., Leadville, Col.
Whittaker, Clark & Daniels, 260 W. Broadway, N. Y.



APPROXIMATE CONSTANTS OF SOAP OILS

Oil or Fat	Sp. Gr. (Water at 15°)	Sap. No.	Iodine Value	Titer °C.	% Non-Sap.
Castor Oil	0.958-0.968	177-187	83-86	3°—	0.3-0.5%
Coconut Oil	0.926	251-263	8-10	20°-23°	0.2
Corn Oil	0.921-0.927	186-193	120-130	15°-19°	1.5-3.0%
Cottonseed Oil	0.915-0.926	191-196	103-115	32°-38°	0.7-1.6%
Linseed Oil	0.931-0.938	189-196	170-204	19°-21°	0.5-1.6%
Olive Oil	0.914-0.919	189-195	79-86	17°-21°	2.0-3.0%
Palm Oil	0.921-0.925	196-205	48-58	42°-45°	0.7-1.0%
Palm Kernel Oil	0.873/99°	244-255	16-23	20°-25°	0.2-0.5%
Peanut Oil	0.911-0.926	185-192	83-95	28°-30°	0.5-1.0%
Sesame Oil	0.920-0.926	188-193	103-115	21°-24°	1.0-1.8%
Soya Bean Oil	0.922-0.925	191-194	125-140	21°-24°	0.3-0.6%
Tallow (beef)	0.943-0.952	193-200	35-47	43°-45°	
Whale Oil	0.922-0.926	188-194	110-150	22°-24°	1.0-3.0%

FATTY ACIDS IN SOAP OILS

Glycerides of Acids	Coconut Oil	Corn Oil	Cottonseed Oil	Linseed Oil	Olive Oil	Palm Oil	Palm Kernel Oil	Peanut Oil	Sesame Oil	Soyabean Oil	Tallow	Whale Oil
Arachidic	—	0.4	0.6	—	0.2	—	—	3.6	4.0	0.7	—	—
Lignoceric	—	0.2	—	—	—	0.1	—	2.9	0.4	0.1	—	—
Linolenic	—	—	—	34.1	—	—	—	—	—	2.2	—	—
Linoleic	—	39.1	42.0	48.5	3.9	9.5	1.0	23.1	35.2	49.3	—	20.0
Myristic	20.0	—	0.4	—	Trace	0.6	16.0	—	—	—	2.0	8.0
Oleic	2.0	43.4	35.0	5.0	83.1	43.2	16.5	56.7	46.0	32.0	44.5	25.0
Palmitic	7.0	7.3	20.0	2.7	9.2	44.0	6.5	7.3	7.3	6.5	29.0	12.0
Palmitoleic	—	—	—	—	—	—	—	—	—	—	—	17.0
Stearic	5.0	3.3	2.0	5.4	2.0	2.9	1.0	5.5	4.4	4.2	24.5	—

Coconut oil also contains 10% Capric, 2% Caproic, 9% Caprylic and 45% Lauric. Palm Kernel Oil contains 6% Capric, 1% Caprylic and 50% Lauric. Whale Oil contains 18% Clupandonic.



a record of proven performance

You have seen these ads before. You have seen these superior perfume oils and compounds achieve highly saleable success in finished products.

They represent but a few instances of the Florasynth pattern of furnishing materials of proven performance as a primary step in creating successful consumer products.



Florasynth

CHICAGO 6 • NEW YORK 61 • LOS ANGELES 13

DALLAS 1 • DETROIT 2 • MEMPHIS 1 • NEW ORLEANS 13
ST. LOUIS 2 • SAN BERNARDINO • SAN FRANCISCO 11

Florasynth Labs. (Canada Ltd.) — Montreal • Toronto • Vancouver • Winnipeg
Florasynth Laboratories de Mexico S. A. — Mexico City





Florasynth

offers materials which have, through the years, made their mark in the creation of highly successful products in the SOAP Industry.

SYNTHETIC ESSENTIALS AND AROMATIC CHEMICALS FOR SOAP

OIL BERGAMOT IMITATION	OIL LAVENDER IMITATION
OIL CASSIA IMITATION	TERPENYL ACETATE
CITROSYNTH (CITRONELLA) IMITATION	LINALOOL
OIL GERANIUM IMITATION	LINALYL ACETATE
ANETHOL	ANISIC ALDEHYDE
CITRAL	IONONE
	HELIOTROPIN

SOAPAROMES AND ODOROMES (for Soaps, Insecticides and Deodorant Blocks)

ALMOND BOUQUET NO. 250	LILAC NO. 250
BOUQUET NO. 400	LILAC NO. 350
BOUQUET CHYPRE NO. 450	NUTRALCO No. 350
CARNATION NO. 400	NUTRALCO NO. 550
CEDAROME NO. 175	ORANGE BLOSSOM NO. 350
CEDARPINE No. 200	ORANGE BLOSSOM NO. 600
ELAN TIBET SAVON NO. 450	ORIENTODOR NO. 400
ELAN TIBET SAVON NO. 12	ROSE BOUQUET NO. 250
JASMIN NO. 250	ROSE GERANIUM NO. 193
JASMIN NO. 400	TREFLE NO. 350
LAVENDER BOUQUET NO. 350	VIOLET NO. 400

CONCENTRATED WATER SOLUBLE PERFUME BASES

BOUQUET C-119	LILAC
CEDAR	MINT BOUQUET NO. 312
CHYPRE	NARCISSUS
CORYLOPSIS	NEW MOWN HAY NO. 120
GARDENIA	ORANGE BLOSSOM
HONEYSUCKLE	PINE BOUQUET
LAVENDER	ROSE

Accurate . . . Effective . . . Available . . . Florasynth synthetics are no longer considered as secondary substitutes but have long since been accepted as primary essentials in the SOAP Industry.



Florasynth

LABORATORIES, INC.
CHICAGO 6, ILL. • NEW YORK 61, N. Y. • LOS ANGELES 13, CALIF.

DALLAS 1 • DETROIT 2 • MEMPHIS 1 • NEW ORLEANS 13 • ST. LOUIS 2 • SAN BERNARDINO • SAN FRANCISCO 11
FLORASYNTH LABS. (CANADA) LTD.—MONTREAL • TORONTO • VANCOUVER • WINNIPEG • FLORASYNTH LABORATORIES DE MEXICO S. A., MEXICO CITY

Reference Section

	<i>Page</i>
OIL AND FAT USED BY SOAP MAKERS IN 1947.....	155
1947 SOAP SALES STATISTICS	157
FAT SALVAGE FACTS	159
SUPPLY AND DISTRIBUTION OF TALLOW AND GREASE.....	160
HOW TO REGISTER UNDER THE INSECTICIDE ACT.....	161
<i>By Sanford J. Hill</i>	
PRACTICAL ASPECTS OF QUATERNARIES.....	165
<i>By Jack C. Varley</i>	
ESTIMATION OF PYRETHRINS	168
<i>By Harvey A. Seil</i>	
NEW FEDERAL INSECTICIDE ACT.....	171
DEFINITIONS OF ANTISEPTICS, DISINFECTANTS, ETC.....	174
<i>By Austin M. Patterson</i>	
N.A.I.D.M. SPECIFICATIONS	177
PEET GRADY METHOD	183
U. S. SPECIFICATIONS	187
DEFINITIONS OF SOAP AND DETERGENT TERMS.....	205
PERFUMING MATERIAL SPECIFICATIONS	207
FLOOR WAX SPECIFICATION	215
SOAP AND SANITARY CHEMICALS' INDEX.....	217
TRADE ASSOCIATION OFFICIALS	225

ALL THE ESSENTIAL MACHINES FOR SOAP MANUFACTURE

THE HOUCHIN LINE includes equipment for making

LAUNDRY SOAP

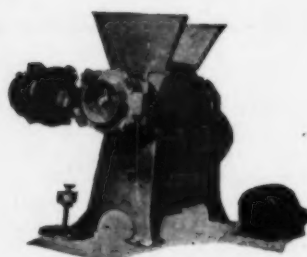
TOILET SOAP

CASTILE SOAP

TEXTILE SOAP

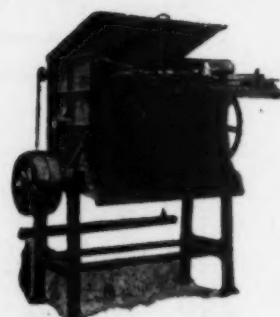
SCOURING
SOAP

CAKES,
PASTE AND
POWDER



**JUMBO COMBINATION
PLODDER**

for milling toilet soap ribbons and
for producing finished bars.



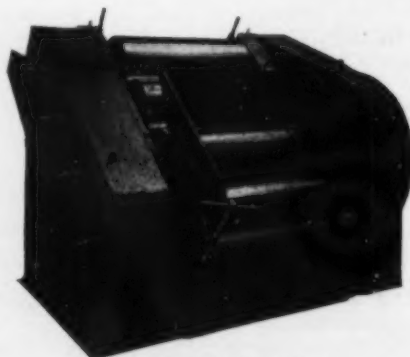
IDEAL AMALGAMATOR

so designed that soap can be emp-
tied into hopper of mill or plodder.



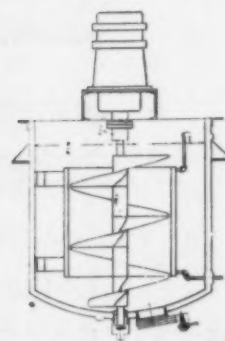
**AUTOMATIC
SOAP CUTTER**

capacity 60/120 frames per day.



TYPE F ROLLER MILL

ROLLS 18" x 40" water cooled.
Heavy frames, large bearings. Gears
run in oil. Gears and bearings en-
tirely covered.



**PERFECTION JACKETED
CRUTCHER**

for making cold-made half-
boiled and floating soaps,
and adding filler to laundry
soaps.

SIXTH AND
VAN WINKLE AVES.
HAWTHORNE, N. J.

HOUCHIN

MACHINERY COMPANY, INC.

Manufacturers of soap making equipment

1947 Soap Fat and Oil Use

A NEAR-RECORD total of 2,126,636,000 pounds of primary animal and vegetable fats and oils was reported consumed for soap in 1947, an increase of about 30 per cent over the previous year, and second largest consumption figure on record. The 1947 figure, as yet only preliminary, and based on the total of preliminary figures for the four quarters of the year, is second only to 1941, when 2,143,857,000 pounds of primary fats and oils were consumed. A total of 238,919,000 pounds of secondary animal and vegetable fats and oils was reported used for soap during 1947, according to figures published by the Bureau of the Census of the U. S. Department of Commerce, Washington, D. C.

Consumption of oils and fats for soap reached its highest point during the fourth quarter of 1947, when 610,442,000 pounds were reported used. In the first three months of the year, 526,449,000 pounds were reported used, making it the second largest quarter for 1947. Dropping to 480,999,000 pounds in the second quarter of the year, reported consumption in the third quarter rose to 509,145,000 pounds.

Accounting for the big gain in fat consumption in 1947, as compared with the previous year, were the sizable increases in the amounts of coconut oil and inedible tallow reported consumed. Better than 50 per cent of all of the fats and oils used was inedible tallow, whose total use in soap for the year was 1,109,005,000 pounds. In 1946, 871,968,000 pounds of inedible tallow were reported consumed for soaps. Grease consumption which totaled 337,871,000 pounds in 1946, advanced to 416,838,000 pounds in 1947, according to the Department of Commerce figures.

Coconut oil use in soap during 1947 was at the highest level in many years. Last year 511,331,000 pounds of coconut oil were reported

consumed for soap, while in the previous year the figure was 184,906,000 pounds. In 1941, 484,124,000 pounds of coconut oil were used in soap.

Babassu oil declined in volume of use during 1947, dropping to 14,582,000 pounds from the previous year's total of 35,834,000 pounds. Castor oil use increased

sharply, while palm kernel oil, which in 1946 was reported at 18,939,000 pounds, fell to 47,000 pounds. In 1947, palm oil consumption, according to the Bureau of the Census figures, dropped over six million pounds to a little more than a million pounds, as against well over seven million pounds in the previous

(Turn to Page 204)

FACTORY CONSUMPTION OF ANIMAL AND VEGETABLE FATS AND OILS IN THE MANUFACTURE OF SOAP

Source: U. S. Department of Commerce Bureau of the Census
(Quantities in thousands of pounds)

Kind	1942	1943	1944	1945	1946 (Preliminary)	1947 (Preliminary)
Cotton oil	2,863	991	586	1,695	522	920
Peanut oil	485	256	564	846	7,347	376
Coconut oil	140,487	142,346	131,558	59,352	184,906	511,331
Corn oil	4,102	833	887	721	299	446
Soybean oil	31,510	15,428	3,258	4,219	3,545	5,375
Olive edible	27	11	83	18	1	4
Olive ined.	365	499	337	302	193	324
Olive foots	4,832	4,987	2,619	1,684	608	439
Palm oil	55,865	32,621	19,675	24,452	7,417	1,091
Palm kernel	1,028	1,840	1,938	29,967	18,939	47
Rapeseed oil ...	....	1	....	....	16	0
Linseed oil	4,019	1,697	2,253	915	576	279
Perilla oil .....	....	....	....	....	3	0
Castor oil	7,949	1,091	17,360	1,857	757	9,235
Sesame oil	189	65	....	....	1	7
Babassu oil	19,105	25,814	13,006	32,477	35,834	14,582
Other veg.	2,487	675	3,164	2,338	448	664
Lard	96	74,039	176,266	82,070	744	5,973
Stearin	483	275	211	....	0	0
Oleo oil	205	2,160	3,243	3,685	3,082	40
Tallow, ed.	634	4,652	43,761	32,067	6,895	7,087
Tallow ined. ...	1,188,923	884,862	1,005,777	952,335	871,968	1,109,005
Grease	338,974	463,811	523,972	412,105	337,871	416,838
Neat's foot	19	68	9	....	41	23
Marine oils	21,989	284	9	2	4	10
Fish oils	50,412	44,688	50,891	114,344	39,710	42,540
Total	1,871,039	1,703,994	2,001,611	1,757,451	1,521,727	2,126,636

For the Perfumer

PERFUME CONCENTRATES for SOAPS, FACE POWDERS, CREAMS
LIPSTICKS, DEODORANTS, PERFUME EXTRACTS, TOILET WATERS, ETC.

RESEDALIA—A chemical which is present in many well known perfumes. It gives a very interesting and unusual note.

CYCLAMAL ACETAL—An interesting development of this well known product. Fainter in aroma than Cyclamal, it is extraordinarily stable.

KETONE 12-A—Is of value in all types of Violet bouquets, wherever Ionones are used and a special Ionone note is desired.

GLYCIDOL—Is valuable in Walnut and Butter flavors.

LILANAL—Has a leafy rose note and is an excellent Lily of the Valley base. It is soft and fine.

ROSANOL—A rose leaf note, reminding of Bromstyrol, but very much finer.

LILANTHAL—Is of value in all types of lilac perfume.

CUIRUSAL—Is an interesting odor for the development of new type perfumes.

SALIXOL—A light, pleasing Cinnamic Willow Bark note. It is of interest both in flavors and perfumes.

CUMINONE—An odor note similar to Cumenic Aldehyde, but much softer and finer.

ACASOL—Of value both in perfumes and flavors.

MUGINOL—For Lily of the Valley type perfumes.

FLORAFAL—Of a floral leafy character.

AROMATIC CHEMICALS

UTMOST PURITY for use in Cosmetics and Perfume for pure finished products.

UNIFORMITY means economy in time and expense . . . with uniform, trouble free results.

ESSENTIAL OILS

DEPENDABILITY as to quality . . . proper packing . . . prompt shipping.

You can depend upon our Aromatics to give the superiority of bouquet that you desire.

A Partial List Comprises

Amuskal
Cyclamal
Ethyl Phenyl Glycidate
Ethyl Methyl Phenyl Glycidate
Ethyl Vanillin
Floranol

Ionone A.B.—Ionone Methyl
Ionone Ketone
Iso Butyl Furyl Propionate
Methyl Naphthyl Ketone,
Crystals, Liquid
Para Cresyl Ethyl Ether

Para Cresyl Methyl Ether
Par Methyl Hydratropic
Aldehyde
Phenyl Ethyl Alcohol
Vanillin
Veratraldehyde

Also Essential Oils and a large additional list of Aromatic Chemicals.

PRODUCT GL 4C—A non toxic wetting agent and detergent with excellent foaming qualities for Liquid Dentifrices, Soapless Shampoos, Brushless Shaving Creams, etc.

FLORANOL—A single chemical used in compounding Rose Odors. Blends with or replaces Phenyl Ethyl Alcohol.

ISO BUTYL FURYL PROPIONATE—A pleasing Pine-apple-like Aroma. Valuable in Perfumes and Flavors.

Our laboratories will work out special odors for your particular purpose.

Requests for samples on your own letterhead will be promptly answered.

Write for a list of our full line of Aromatic Chemicals.



Aromatics Division
GENERAL DRUG COMPANY
644 Pacific St., Brooklyn 17, N. Y.

9 S. CLINTON ST., CHICAGO 6

1019 ELLIOTT ST., W. WINDSOR, ONT.

Soap Sales Statistics

DELIVERY of soaps other than liquid and total worth of all types of soap made and sold in the United States during 1947 increased sharply over the previous year, according to figures compiled by the Association of American Soap & Glycerine Producers, New York. Last year, 2,814,947,000 pounds of soap other than liquid, worth \$640,586,000, were shipped and sold by 70 manufacturers who reported sales and delivery figures to the Soap Association. In 1946, 2,328,377,000 pounds of non-liquid soaps, having a sales value of \$383,757,000, were reported shipped by the same number of manufacturers.

Liquid soap deliveries reported by 40 manufacturers registered a decline in volume of over 600,000 gallons in 1947, as compared with the previous year. Liquid soap volume last year was reported as 3,109,000 gallons, having a value of \$3,944,000, while a year earlier, 4,011,000 gallons of liquid soap worth \$4,599,571 were shipped. In 1945, deliveries of liquid soap reached their highest point, totaling 4,272,000 gallons, having a sales value of \$4,724,000.

The aggregate sales worth of deliveries of all types of soap reported for 1947 by manufacturers participating in the census was \$644,530,000, which represents an increase of 90 per cent over 1946.

Dollar volume from sales of

SOAP SALES 1938-1947 (in thousands of dollars)					
	1938	1939	1940	1941	1942
1st Quarter	66,771	68,020	68,829	78,929	106,860
2nd Quarter	64,012	46,346	65,101	90,194	75,879
3rd Quarter	67,655	77,461	66,189	85,906	94,121
4th Quarter	57,142	58,853	58,385	70,057	85,248
Total	255,580	268,680	258,504	325,086	362,108
	1943	1944	1945	1946	1947
1st Quarter	90,945	104,523	110,214	91,807	160,606
2nd Quarter	84,546	108,680	102,533	89,298	145,664
3rd Quarter	94,600	112,312	93,045	76,550	141,507
4th Quarter	101,996	115,596	97,451	124,386	188,641
Total	372,087	441,111	403,243	382,041	636,418
SALES IN POUNDS (thousands)					
	1943	1944	1945	1946	1947
1st Quarter	710,047	783,699	805,101	616,357	677,788
2nd Quarter	650,394	822,035	751,636	601,661	643,575
3rd Quarter	694,784	812,677	654,707	494,391	679,360
4th Quarter	752,402	854,526	649,654	602,966	791,307
Total	2,807,627	3,272,937	2,861,098	2,315,375	2,792,030

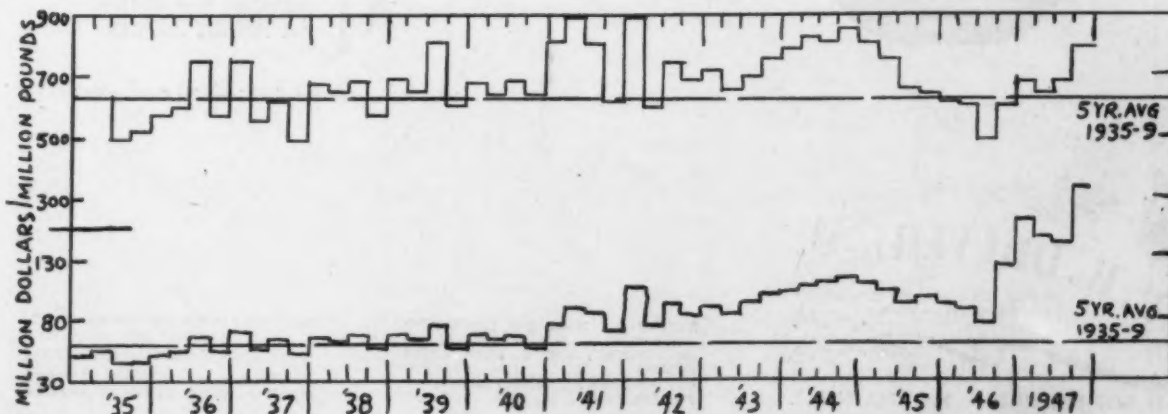
Above figures include only comparable totals of reporting members of Assn. American Soap & Glycerine Producers

soap made and shipped during 1947 both for the entire year and for each quarter was larger than for the corresponding periods since figures have been kept starting in 1935. Dollar volume in the fourth quarter of 1947, the largest quarter on record, from the standpoint of value of soap shipped, was almost as large as the sales reported for the entire year of 1935. Reported deliveries of other than liquid soap during the final three months of 1947 were second largest of any fourth quarter since 1939. Annual overall volume

of non-liquid soaps shipped last year was the fifth in size for the years 1935-'47.

Fourth quarter, 1947, deliveries of other than liquid soap—the largest of any quarter during the year—amounted to 797,078,000 pounds and had a sales value of \$189,752,000. Second largest quarter of last year, from the standpoint of dollar volume, was the first quarter, which oddly enough had a smaller volume of soap delivered than the third quarter, which occurred in 1946.

(Turn to Page 204)



DREYER SUPPLIES

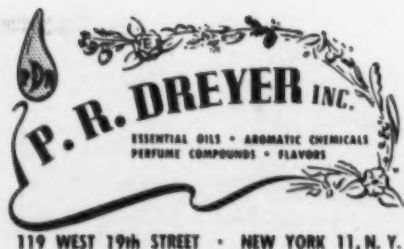
MORE THAN 10,000 TESTED AND APPROVED ODORS AND
TECHNICAL PERFUMES COVERING A WIDE PRICE RANGE



liquid or powder essences
in oil or alcohol types for

TOILET WATERS
SOAPS
SHAMPOOS
PERFUMES
LOTIONS
CREAMS
FACE POWDERS
TALCS
LIP STICKS
ROUGES
MEN'S PREPARATIONS
SACHET
INCENSES
BATH SALTS
MANICURE PREPARATIONS
ALL PURPOSE ESSENCES

For Prices and Samples, Send for Catalog "B"



119 WEST 19th STREET • NEW YORK 11, N. Y.

BOSTON . . . HAROLD H. BLOOMFIELD
CHICAGO . . . WM. H. SCHUTTE CO.
CINCINNATI . . . WM. G. SCHMITHORST
DETROIT . . . L. H. CARLSON
LOS ANGELES . . . ALBERT ALBEK, Inc.
PHILADELPHIA . . . R. PELTZ CO.

THOMPSON-HAYWARD CHEMICAL CO.
KANSAS CITY
AND CITIES THROUGHOUT MIDDLEWEST
MEXICO . . . EMILIO PAGUAGA
PRINCIPAL CITIES IN SOUTH AMERICA

Fat Salvage Facts

IN THE 67 months, August 1942 through February 1948, American homemakers and the armed forces have recovered a total of 864,318,000 pounds of used cooking fat. American women who have salvaged waste fats have done a man-sized job, because kitchen fats salvaged over the 67 month period are equal to nearly 10 per cent of total U. S. production of inedible tallow and grease over the same period.

Household kitchen fat salvage has produced 678,470,000 pounds or 78 per cent of the total used fat saved. The armed services salvaged the balance. Current military collections are far below wartime, while household fat salvage collections still continue to average better than 10 million pounds a month.

Today, world-wide shortages of fats and oils are still acute and point up the need for fat salvage in the U. S. Charles E. Lund, Chief of the Foodstuffs Division, U. S. Department of Commerce, summarizes the fats and oils situation for 1947 with these statistics: "Production of fats and oils from domestic materials reached 9.9 billion pounds in 1947 . . . supplies were

increased by net imports of 475 million pounds . . . net receipts were 300 million pounds greater than in 1946, but were still more than one billion pounds below the pre-war average. Domestic disappearance of 10.4 billion pounds was one billion higher than 1946 and the largest since 1941. However, the attainment of this consumption did not permit any significant increase in stocks from previous low levels. Holdings at the close of 1947 totaled 1.3 billion pounds. . . ."

International trade in fats and oils, however, presents an even darker picture according to the Department of Agriculture's Office of Foreign Agricultural Relations. "World production and movement of supplies since the end of the war have not recovered sufficiently to take care of postwar needs. In 1947, about 3.5 million tons (seven billion pounds) of fats and oils went into world markets. This is three million tons below the prewar average of 6.5 million tons." It would take, for example, more than 70 per cent of U. S. production of all kinds of fats and oils last year to equal this seven billion pound deficit in world trade.

The importance of fat sal-

vage can easily be judged when collections are represented in terms of soap. Assuming that 6/10 of a pound of fat makes one pound of soap, the 847 million pounds of salvaged fat (as of the first of this year) would equal 1,412,000,000 pounds of soap. This represents 941,000,000 24-ounce packages of soap. If 24 packages were packed to a case, they would represent 39,000,000 cases of soap. Assuming the average per capita consumption of soap (not including scouring cleanser or washing powders) is 20 pounds a year, salvaged fats would supply 71,000,000 people with soap for a full year, or stated differently, salvaged fat would supply the entire U. S. population with household soap requirements for a half year.

Although this theoretical application of fats salvaged a teaspoonful at a time is impressive, salvaged fat has a far greater implication. Soapmakers know that many kinds of fats and oils are interchangeable and can be used either industrially or as food fats. Used kitchen grease, processed and refined for industrial uses, makes available greater supplies of food fats for shipment all over the world. The fact that this

(Turn to Page 231)

Civilian Fat Salvage Collections

	1942 lbs.	1943 lbs.	1944 lbs.	1945 lbs.	1946 lbs.	1947 lbs.	1948 lbs.
January		6,017,557	14,870,000	15,050,000	12,532,000	10,630,000	8,603,000
February		6,977,664	15,253,000	14,073,000	12,241,000	11,966,000	9,161,000
March		7,335,997	17,666,000	17,332,000	16,077,000	11,940,000	
April		7,327,133	18,272,000	15,307,000	13,965,000	13,313,000	
May		7,982,500	16,958,000	13,533,000	13,441,000	12,425,000	
June		8,646,605	14,663,000	11,498,000	11,244,000	11,216,000	
July		7,819,082	14,803,000	10,049,000	9,225,000	8,411,000	
August	3,016,338	7,341,875	11,379,000	9,380,000	8,776,000	6,925,000	
September ...	3,812,728	7,288,544	11,490,000	8,011,000	6,428,000	5,963,000	
October	4,821,160	7,379,483	12,069,000	10,735,000	4,545,000	6,845,000	
November ...	4,718,155	6,815,750	11,457,000	9,347,000	5,223,000	6,941,000	
December ...	5,098,846	8,924,350	11,734,000	8,577,000	7,445,000	8,159,000	

Inedible Tallow and Grease* Apparent Production, by Months or Quarters, 1924 to Date

(Million Pounds)

Year	Jan.- Mar.	April- June	July- Sept.	Oct.- Dec.	Total
1924	220	207	218	203	848
1925	215	208	191	192	806
1926	206	215	217	215	853
1927	225	228	209	194	856
1928	211	205	169	211	796
1929	215	213	199	217	844
1930	219	221	211	216	867
1931	215	238	215	218	886
1932	218	232	192	205	847
1933	210	236	236	251	933
1934	262	262	252	245	1021
1935	162	160	148	177	647
1936	173	198	197	248	816
1937	230	223	192	209	854
1938	232	235	215	249	931
1939	256	286	265	316	1123
1940	383	350	292	350	1375
1941	350	408	385	407	1550
1942	437	459			

	Jan.	Feb.	March	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1942	...	...	...	...	...	...	152	147	129	138	150	127	1737
1943	126	135	140	125	131	131	138	141	142	131	148	150	1638
1944	165	190	194	162	182	163	152	153	133	155	154	135	1938
1945	161	155	169	146	139	139	133	138	133	152	150	134	1749
1946	164	172	163	159	142	106	150	128	90	79	145	153	1651
1947	176	166	158	168	194	175	145	159	151	177	174	(185)	(2028)
1948	...	...	...	...	...	...	...	...	...	...	...	...	...

Inedible Tallow and Grease* Supply and Disposition, 1920 to Date

(Million pounds)

Calendar Year	Total Apparent Production	Stocks Jan. 1	Imports of Tallow	Total Supply	Exports	Factory Consumption	Use in Soap
1935-39 Avg.	874	315	64	1254	10	949	787
1924	848	125	2	975	116	758	721
1925	806	101	2	909	104	714	633
1926	853	91	14	958	86	741	673
1927	856	131	13	1000	93	781	727
1928	796	126	14	936	68	765	702
1929	844	103	17	964	66	736	681
1930	867	162	1	1030	74	741	687
1931	886	215	1	1102	80	773	653
1932	847	249	...	1096	60	786	693
1933	933	250	...	1183	73	767	634
1934	1021	343	43	1407	58	952	806
1935	647	397	246	1290	20	914	761
1936	816	356	69	1241	16	923	759
1937	854	302	4	1160	5	886	708
1938	931	269	1	1201	3	942	798
1939	1123	256	1	1380	5	1079	906
1940	1375	296	1	1672	7	1234	1043
1941	1550	431	30	2011	7	1649	1367
1942	1739	355	64	2158	5	1852	1528
1943	1638	301	32	1971	2	1749	1360
1944	1938	220	56	2214	25	1919	1530
1945	1749	270	31	2050	10	1840	1364
1946	1651	200	3	1854	9	1672	1210
1947	2028	173	...	2201	71	1885	1532
1948	...	245	...	...	...	...	...
1949	...	...	...	...	...	...	...
1950	...	...	...	...	...	...	...

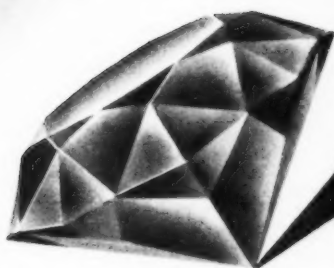
SOURCE: Factory Consumption, stocks, imports and exports from the Bureau of the Census, apparent production computed.

* Excludes wool grease

Compiled by Industrial Commodity Corporation



True value....



The true value of a fine garnet is quickly recognized
by the brilliance of its rich winey color and the
purity of its cutting. In fine toilet soaps,
it is perfume that bespeaks true value. At the
counter, a buyer cannot compare ingredients,
mildness or lathering quality . . . often,
her decision is based on odor alone. A perfume
that says "true value" means a soap that sells.

VAN AMERINGEN-HAEBLER, INC.

315 FOURTH AVENUE, NEW YORK 10, NEW YORK.

5
4
8
U

AROMATIC CHEMICALS

In this list of aromatic chemicals, those indicated in bold faced type are featured items of our factory which we consider to be particularly interesting to the soap maker. Many of these items are newly discovered aromatics with hitherto unknown odor

Acetophenone
 Alcohol C-8
 " C-9
 " C-10
 " C-11
 " C-12
 Aldehyde C-8
 " C-9
 " C-10
 " C-11 (Undecylenic)
 " C-12
 " C-14
 " C-16 (Methyl Phenyl Ethyl Glycidate)
 " C-18
 Allyl Caproate
Ambrain—the concentrated heart of Labdanum, without waxes or gum.
Amyl Cinnamic Aldehyde (Flomine Coeur)
 Anisic Acetate
 Anisic Alcohol
 Aubepine (Anisic Aldehyde)
 Benzoin Resin Absolute
 Benzophenone
 Benzyl Acetate
 Benzyl Salicylate
 Bromstyrol
 Bois de Rose Terpeneless
 Cedarwood Oil White
Cedrenol—Sweet, woody, rich—very lasting and stable in soap.
Cedrenyl Acetate—Lively, woody, balsamic, sweet and lasting.

Cinnamic Alcohol
 Cinnamic Aldehyde
 Citral
Citronellol Coeur
 Citronellyl Acetate
 Citronellyl Propionate
Civetone
 Coumarine
Dimethyl Benzyl Carbinol—Flowery, valuable in floral bouquets, especially lilac.
Dimethyl Benzyl Carbonyl Acetate—Rich, Rose-otto note, very floral, powerful and sweet in soap.
 Diphenyl Oxide
 Ethyl Phenyl Acetate
 Eugenol U.S.P.
 Eugenol 95%
Fructose—Remarkably powerful fruit character for soap.
Fruit Ketone—Fruity, refreshing, pineapple note.
 Galbanum Soluble Resin
Geralax—A new synthetic development embodying the characters of Linalyl Acetate and Geranyl Acetate.
Geralax B—Same as above—more economical.
Geralin—A new synthetic development embodying the characters of Linalool and Geraniol.
Geralin B—Same as above—technical grade.
 Geraniol Absolute
 Geraniol C.D.
 Geraniol Coeur
Geranoxide—Rosy, good in soap.

VAN AMERINGEN
 315 FOURTH AVENUE

FOR THE SOAP MAKER . . .

characters. From these, endless and unusual soap perfumes can be created. If these materials are not already known to you, ask for a sample as we know you will find them interesting and worthy of your consideration.

Geranyl Acetate Coeur
 Geranyl Acetate C.D.—less expensive grade.
 Geranyl Butyrate
 Geranyl Propionate
Girella—Inexpensive fresh spicy character suitable for use directly in soap products.
 Heliotropine
 Hydratropic Acetate
Hydratropic Alcohol—Very flowery and lasting in soap.
 Hydroxycitronellal
 Ionone Extra C-1
 Ionone Extra Pure
 Ionone Alpha White
 Ionone Alpha Methyl
 Ionone Beta
 Ionone Methyl C-60
Ionone Methyl Gamma Pure—the richest of the Methyl Ionones.
 Iso Butyl Phenyl Acetate
 Iso Eugenol
Iso Jasmine—Very powerful Jasmin body—very lasting in soap.
Iso Jasmine B—Technical grade
Jessemal—Rich Jasmine note; excellent in soap
 Labdanum Resin Absolute
 Linalool B
 Linalool B Extra
 Linalool Coeur
 Linalyl Acetate 90-92%
 Methyl Benzoate

Methyl Cinnamate
 Methyl Hexyl Ketone
 Methyl Nonyl Acetaldehyde
 Methyl Phenyl Acetate
 Myrrh Coeur (Resin Absolute)
 Nerolin
 Oak Moss Absolute
 Olibanum Coeur (Resin Absolute)
 Opoponax Resin Absolute
 Para Cresyl Acetate
 Para Cresyl Phenyl Acetate
Petitgrain Absolute
 Phenyl Acetaldehyde Dimethyl Acetal
Phenyl Ethyl Acetate
Phenyl Ethyl Alcohol
 Phenyl Ethyl Benzoate
 Phenyl Ethyl Cinnamate
 Phenyl Ethyl Propionate
 Phenyl Propyl Alcohol
 Phenyl Propyl Propionate
 Rhodinol Coeur
 Rhodinol Acetate
 Styrax Coeur (Resin Absolute)
 Styrallyl Acetate
 Styrallyl Alcohol
Talia—A new chemical possessing a green, leafy, powerful, violet-like character.
 Terpeneol
 Terpinyl Acetate
 Terpinyl Propionate

HAEBLER, INC.

NEW YORK 10, N. Y.



FINISHED SOAP PERFUMES

For those soap makers who prefer to use finished perfume oils, we offer the art and experience of our staff of skilled perfumers. Soap perfumery is a highly specialized field, requiring a technical knowledge of the soap business and its chemistry as applied to perfume materials plus, of course, the creative flair of the true perfume artist. All of our soap perfumes are thoroughly tested in sample soap cakes.

We can supply odors specifically developed for shampoos, liquid soaps and general industrial uses as well as the finest bouquets for the finest toilet soaps. For your particular requirements, we will develop special and distinctive oils for your exclusive use.

Tell us your requirements, odor preference and cost limits and we will submit our samples, immediately.

VAN AMERINGEN - HAEBLER, INC.

315 FOURTH AVENUE, NEW YORK 10, N. Y.

HOW TO REGISTER

Under the new Federal Insecticide Act

By Sanford J. Hill*

E. I. du Pont de Nemours & Co.

Simplified procedure for preparing cover sheets and data sheets for Federal and State registration . . . adapting existing single product forms for use as cover sheets.

THE passage of the Federal Insecticide, Fungicide and Rodenticide Act and the similar Model State Bill in seven states (North Carolina, Colorado, Montana, North Dakota, South Dakota, Vermont and Kansas) has made it necessary for many manufacturers and distributors of economic poisons to register their products more widely.

To lighten the work involved in registration, representatives of the NAIDM and AIFA have been working with state regulatory officials since the first of the year for the adoption of uniform registration procedures with the object of eliminating a tremendous amount of repetitive typing and signing, and making possible rapid completion of registration, accurately, and with a minimum of labor.

Under the suggested simplified registration procedure, application for the registration of all products is made on a cover sheet. Attached to this will be product data sheets for each product to be registered and, when required, labels for each product. This system is adaptable to every state's requirements and the form of the cover sheet is sufficiently flexible to provide for slight variations among the various state laws.

It is important to prepare registration material carefully. It is of the utmost importance that the per-

son or persons in charge of the registration work for any company should (1) carefully read the various laws, or at least the sections of the laws pertaining to registration, (2) carefully study any regulations which have been promulgated, and finally, (3) observe the instructions which are on or sent with the registration blanks. Reports from both federal and state officials indicate that these things have not always been done and that many unsatisfactory applications for registration have resulted. It is grossly unfair to expect satisfactory results if the completion of registration material is assigned to a person unfamiliar with all the details.

The cover sheet should be completed first in preparing applications for registration. Most prospective applicants have received application blanks from the Federal Insecticide Division and from Kansas, Vermont and South Dakota. They are typical examples of the new procedure.

THE federal blank is a masterpiece of simplicity. On this form the number of products to be registered should be stated in the designated space. In listing the brand names they may be numbered consecutively, if desired, but it is probably undesirable to number the products because the sequence will lose significance when additional blanks are used for subsequent registrations and if certain products are not accepted for registration. The space provided for listing will accommo-

date about forty names and, if this is insufficient the listing may continue on an attached sheet. Attention is drawn to the last feature on the blank which provides for a mailing address if different from that shown with the firm name. It should be noted that only one copy of this form is to be submitted each time application is made for registration. A carbon copy should be retained for file.

Kansas was one of the first states to adopt the new procedure. Since annual registration and fees are required in Kansas, their form differs slightly from the federal application. This form may be used for all types of registration—original, supplemental and re-registration. The latter two types of registration should be indicated by heading the list with the appropriate designation. Re-registration may be effected merely by listing the products concerned provided no changes in product or labeling have occurred during the year. However, it is suggested on the blank that complete data be submitted each year so that the state files are kept up-to-date. The Kansas form is to be executed in duplicate and the duplicate form will be returned to the applicant as evidence of registration. Although products may be numbered in the application, the desirability of this practice is questionable, as mentioned under the discussion of the federal blank.

The Vermont cover sheet is perhaps the simplest of all as it requires no listing of products. How-

* Based on a talk before the Nat'l. Association Insecticide & Disinfectant Mfrs., Baltimore, Md., Dec. 1, 1947.

ever, it should be noticed that the attachment of *numbered* product data sheets is requested in order to tie in with the cover sheet. These data sheets will be discussed later. The Vermont form provides no space for a mailing address but there would probably be no objection to typing this in the space above the line "fee enclosed." Only one copy of the Vermont application is required.

The South Dakota application illustrates another variation possible in the design of the cover sheet. This form provides for the listing of the name and address given on the label of the product if other than that shown on the application. Presumably this information is necessary here since no data sheets are required in South Dakota. Although it is realized that the heading "Name of Poisons" refers to economic poisons the word "poisons" is perhaps an unfortunate word inasmuch as many of the products in this field are not properly classed as poisons. It is assumed that it will be satisfactory to show the desired mailing address in the block in the upper left-hand corner. Of great interest to all registrants is the possible elimination of the sample requirement in South Dakota. This was discussed with the South Dakota officials during the past summer and it is expected that official announcement will be made that this requirement will be waived except in special cases where individual samples may be requested.

Permission was secured from the Maryland Inspection and Regulatory Service to indicate the way in which a single product form might be altered to use as a cover sheet under the new procedure. The Maryland form (Fig. 1) is typical of forms used in many states for individual product registrations and serves to illustrate how such forms may be modified (when such modification is permitted) to adapt them to the new procedure. It is our understanding that such modification will be acceptable in the states of New Jersey, Minnesota and North Dakota until such time as new forms are issued. It is possible that certain

other states will accept such modification in the near future.

Product data sheets, wholly prepared by the registrant, are something new in registration. Analyses and other information formerly entered on the old application blanks will now be given on an 8½ x 11 product data sheet. No standard form has been set up and the illustrative data sheets reproduced here are suggested forms which have met with acceptance by the officials. The information required varies among the states and the product data sheet should contain sufficient information to be acceptable in every state. So far no state has objected to receiving more data than it requires. It is suggested that data sheets be prepared with great care, then mimeographed, or otherwise duplicated, for convenience. If only a few are needed, good carbon copies will suf-

fice. Occasionally one state may require special information which the registrant will prefer to add to the data sheet for that state only.

Figures 2 to 5 are reproduced to illustrate certain points which are commonly met. The nature of the product is identified at the top for ready reference. Next, the name of the product is shown. It is suggested that care be given to trade-mark protection in stating the name of the product. The desired mailing address is included on the data sheets for the convenience of the officials. The guaranteed analysis will give the same information as shown on the label if quantitative disclosure of ingredients is made thereon. If qualitative disclosure is made on the label, the quantitative disclosure must be given on the data sheet. (The Federal Regulations provide for the confidential handling of such data).

ORIGINAL

STATE OF MARYLAND

REGISTRATION NO. _____

REGISTRATION FORM FOR INSECTICIDES AND FUNGICIDES

INSPECTION AND REGULATORY SERVICE
College Park, Maryland

Application is hereby made for the registration of a brand of Insecticide/Fungicide for a period beginning with the actual date of registration and continuing until December 31, 1948, said Insecticide/Fungicide to be sold under a label showing brand name, guarantee, list of ingredients, or other declarations as follows: *shown on the attached sheet*

Brand Name _____

GUARANTEED ANALYSIS

described on the attached data sheet

I hereby certify that the information appearing above is true and correct in every respect; that each and every package of the above named material will be labeled as shown (and in addition that net weight and manufacturer's name and address will be shown); that the above declarations are the guarantee of the applicant as to the chemical composition of the material above named; and that this application is made for and on behalf of:

attached

Name of Manufacturer or person responsible for placing material on market _____

State _____ City _____ State _____

By _____ Applicant

Mailing Address in Full _____

Name and Position of Person Signing _____

NOTE—Registration fee \$5.00 per brand (no registrant to pay more than seventy-five dollars in any one calendar year, regardless of the number of brands registered). Make remittance payable to Maryland Inspection and Regulatory Service. (Applicant not to fill in below this line.)

CERTIFICATE OF REGISTRATION

This certifies that the above named applicant is hereby licensed to sell the above brand of Insecticide/Fungicide in the STATE OF MARYLAND for a period beginning with the actual date of registration and ending December 31, 1948, when sold, offered, or exposed for sale under the brand name and guarantee as they appear above: *on the attached sheet*

Filed _____ Date _____ State _____

RETURN BOTH COPIES TO THIS OFFICE

Figure 1.

PRODUCT DATA SHEET
FOR THE REGISTRATION OF THE INSECTICIDE

"ROZAN" Fly Spray

Manufactured for: Anybody's Specialty Co.
Anywhere, Illinois

Mailing Address: Anybody's Specialty Co.
Attention: John Q. Somebody
100 Main Street
Anywhere, Illinois

GUARANTEED ANALYSIS

<u>Active Ingredients</u>	100%
Dichlorodiphenyltrichloroethane (DDT setting point 99°C. min.)	8.0%
Pyrethrins	0.1%
Petroleum Hydrocarbons	91.9%

Supplemental Information

Manufactured by: Underground Refining Co.
at: Open Spaces, Texas

Package sizes generally distributed: 1 pt., 1 qt., 1 gal.

Figure 2.

PRODUCT DATA SHEET
FOR THE REGISTRATION OF THE INSECTICIDE AND FUNGICIDE

"ROZAN" Home Garden Dust

Manufactured by: Anybody's Specialty Co.
Anywhere, Illinois

Mailing Address: Anybody's Specialty Co.
Attention: John Q. Somebody
100 Main Street
Anywhere, Illinois

GUARANTEED ANALYSIS

<u>Active Ingredients</u>	84.0%
Chloron Isomer of Dodecylmethylphosphates	0.0%
Other Isomers of Dodecylmethylphosphates	4.4%
Zinc Dinopropylalcholate (Total Zinc as metallic 1.63%)	3.8%
Copper Chloride ($CuCl_2 \cdot 2H_2O$) (Total Copper as metallic 0.47%)	1.1%
Sulfur (average particle size 4 microns)	74.1%

Inert Ingredients 16.0%

Manufactured at: Chemical Falls, Michigan

Package sizes generally distributed: 8 oz., 1 & 4 lb.

Figure 3.

PRODUCT DATA SHEET
FOR THE REGISTRATION OF THE WEED KILLER

"ROZAN" Lawn Weeder

Manufactured by: Anybody's Specialty Co.
Anywhere, Illinois

Mailing Address: Anybody's Specialty Co.
Attention: John Q. Somebody
100 Main Street
Anywhere, Illinois

GUARANTEED ANALYSIS

<u>Active Ingredient</u> - Isopropyl 2,4-Dichlorophenoxyacetate (2,4-Dichlorophenoxyacetic acid equivalent 11.6%)	13.0%
<u>Inert Ingredients</u>	86.9%

Weight per Gallon 8.3 pounds

Supplemental Information

Manufactured at: Chemical Falls, Michigan

Package sizes generally distributed: 1 pt., 1 gal.

Figure 4.

PRODUCT DATA SHEET
FOR THE REGISTRATION OF THE RODENTICIDE

"ROZAN" Ratallax (Brown Rats)

Manufactured by: Anybody's Specialty Co.
Anywhere, Illinois

Mailing Address: Anybody's Specialty Co.
Attention: John Q. Somebody
100 Main Street
Anywhere, Illinois

GUARANTEED ANALYSIS

<u>Active Ingredient</u> - Alphamethylthiourea	10%
<u>Inert Ingredients</u>	90%

Supplemental Information

Manufactured at: Chemical Falls, Michigan

Package sizes generally distributed: 4 & 8 oz., 1 & 5 lb.

Label includes (in red) "POISON" - skull & crossbones - antidote.

Figure 5.

Figure 2 gives the analysis of a typical fly spray. Note that "petroleum hydrocarbons" is considered an active ingredient.

The analysis in Figure 3 illustrates several points: (1) the method of listing an isomeric active ingredient when one of the isomers is particularly effective and desirable,

and other isomers are grouped because of their lesser activity; (2) the requirement (in some states) for showing the equivalent percentage of metal present in certain metallic compounds where these are active ingredients; (3) the display of the formula $CuCl_2 \cdot 2H_2O$ leaves no doubt as to the composition claimed; (4) the re-

quirement (in some states) for stating the particle size of sulfur in products recommended for dust application.

Figure 4 is a data sheet for a typical 2,4-D herbicide. The statement under the active ingredient gives its equivalent in terms of 2,4-D

(Turn to Page 205)

Serving Canada Coast to Coast



Our new head office, laboratory and factory

FLEET and BATHURST STREETS, TORONTO, CANADA

135 Salesmen
29 Sales Branches
Serving in excess
of 65,000 accounts
in Canada

**G. H. WOOD
& COMPANY LIMITED**
Sanitation for the Nation

Practical Aspects of

QUATERNARIES

By Jack C. Varley*

James Varley & Sons, Inc.

IT WAS about two years ago that general interest in quaternaries as sanitizers was first widely evidenced. Little was known of the mechanics by which these quaternaries destroyed bacteria, but they appeared to have very powerful bactericidal properties as well as great inhibitory value. There still exists quite a bit of confusion as to the ultimate or maximum killing potency of these compounds, but we do know that within certain limits under practical conditions they can be used as germicides, antiseptics and sanitizers with excellent results.

Quaternary ammonium compounds ordinarily are colorless, or at any rate completely colorless when in usable dilutions. They are almost entirely without odor and in the solution generally employed in practice have only a very slight taste.

Although most quaternaries on the market form profuse suds, they do not, of themselves, have very great detergent value. In fact by ordinary standards, their detergent properties are very poor. Glasses, dishes, knives and forks, etc. that are heavily contaminated with fat, grease, or other organic matter cannot be cleaned with the ordinary quaternary solution. It is necessary that the articles first be washed, preferably in a solution containing organic alkaline detergents, then rinsed in clear water to remove the detergent and then given a final rinse in the quaternary solution to destroy any germ life that may remain on the article.

Solutions of quaternaries have shown no evidence of causing skin irritations, indicating that the hands

can be in and out of the solution daily without any fear of injury to the user.

Because quaternaries, as a general rule, lower the surface tension of solutions, a greater opportunity is given to contact all surfaces, thereby insuring better disinfecting action.

There are a great number of quaternaries being offered the trade but too little is known concerning the true germicidal properties of most of them. A few of the compounds, however, have been under investigation for a number of years and the manufacturers are able to substantiate their claims from a chemical, bacteriological, toxicological, biological and practical usage viewpoint.

The compounder or distributor of quaternary ammonium compounds would do well to investigate material quality and his source of supply thoroughly before marketing a package for resale. The manufacturer's phenol coefficient claims alone are not sufficient grounds to market the product as a general disinfectant, sanitizer, deodorant, cleanser, and antiseptic. It is interesting to note that a cresylic disinfectant containing 50 per cent cresylic acid made by manufacturer "A" and another cresylic disinfectant containing 50 per cent cresylic acid made by manufacturer "B" will both have almost identical germ killing properties provided the formulations are along the same lines. This doesn't hold true of quaternaries, however. A 10 per cent solution of manufacturer "X"'s product may show 50 per cent or 100 per cent higher germicidal activity than a 10 per cent solution of the product made by manufacturer "Y." Because of this wide variation in laboratory germ killing values it is necessary to control the dilution factor for these compounds when they are to be used under practical condi-

tions. For instance, some of these quaternaries will destroy bacteria *in the laboratory* even when diluted as high as 1 to 100,000 with water. Under practical conditions of use in the actual sanitizing of eating utensils, however, this product might not destroy bacteria in a dilution greater than 1 to 8,000. A tentative procedure now being advanced by most manufacturers of quaternaries is to recommend that one part quaternary be added to 6,000 parts of water. (If employing a 10 per cent solution, this would mean 1 ounce of 10 per cent solution to 600 ounces of water, or 1 ounce to approximately 5 gallons of water). This solution, under practical conditions of use, has so far proven effective in almost completely destroying bacteria life in the final rinse solution.

Detergent Value

QUATERNARIES are sometimes referred to as "wetting agents," "detergents" or "cationic detergents." It is true that most quaternaries lower the surface tension to a considerable degree and usually form volumes of rich suds. This is no indication, however, of detergent action. The fact that a product is a good detergent does not mean it is a good wetting agent and vice versa. An excellent wetting agent may possess very poor detergent qualities. Therefore, it is not in order to describe all quaternaries as detergents or to ascribe to them any great degree of cleansing power, especially in the concentrations generally recommended for sanitizing purposes.

The amount of suds that a quaternary compound produces in water is not an indication of its germicidal value any more than it would be an indication of its detergent property. Some quaternaries with relative-

* Based on an article in *Soap & Sanitary Chemicals*, December, 1947.

ly low sudsing value show excellent germ-killing properties, whereas others that form copious suds do not exert great bactericidal effect.

Many times the question has arisen as to whether or not the combination of an alkaline detergent and a quaternary can be used in one tank so as to both clean and sanitize the eating utensils in one operation. The answer is "NO." In a very short time the organic matter, (oils, fats, and debris from the eating utensils) would nullify the sanitizing properties of the quaternary, rendering it useless. When using quaternaries a minimum of two tanks is required for sanitization of eating utensils. Three tanks are preferable, but if only two are provided, the first tank should contain the cleaning solution and the second tank the quaternary solution for the final rinse.

IT IS in the field of disinfection that quaternaries are running into difficulty. The user of industrial disinfectants expects the disinfectant to clean as well as destroy bacteria. Most commercial disinfectants are formulated with mixtures of soap and some ingredient toxic to germ life. The claim is often made for these compounds, pine oil disinfectant, cresol compound, coal tar disinfectant and some of the newer synthetics, that they will clean and disinfect in one operation. Quaternaries alone cannot perform in this manner because of their low detergent value, and as quaternaries are not compatible with soap, the two cannot be used together with satisfactory germicidal results. The only other alternative would be to make a mixture of trisodium phosphate, tetrasodium phosphate or some other organic detergent with the quaternary and use the combination for cleaning and disinfecting inanimate objects. This evidently would be a rather unsatisfactory formulation because the phosphates would be too harsh for general use on floors, painted surfaces, metal fixtures, etc.

In addition, users of commercial disinfectants expect the customary deodorant characteristics.

In the past two or three years the use of quaternary ammonium germicides has become very widespread. Originally these products were employed primarily for disinfecting or cleansing in the operative field during surgery and to some degree for washing and scrubbing surgeons' hands and arms in aseptic surgical practice. For the disinfection of surgical instruments, quaternaries have not proven satisfactory unless some sort of inhibitor is used to prevent rusting or pitting of the instruments. Because the quaternaries exert a decided wetting action and lower the surface tension tremendously, they quickly cause oxidation of metal.

Recently a great deal of interest has been centered around the use of quaternaries for general disinfection purposes. These products are being put to use in a wide variety of industries including food establishments, dairies, pasteurizing plants, hospitals, homes and in swimming pools and for disinfection in laundries—along with dozens of other recommended uses. (See list at end of this article.)

Quaternaries are not by any means the answer to the search for the so-called "perfect disinfectant," although they do have a very definite place in the sanitation field. Their scope of use will no doubt widen in years to come, but at the present time the use of quaternaries seems to be more or less limited to sanitation problems and to a lesser extent disinfection and antiseptic measures.

It might be well to offer at this point a brief explanation as to the difference between "sanitation" and "disinfection." The word "sanitized" is generally understood to indicate a degree of cleanliness that will insure safety to human beings. Drinking water, for instance, is considered safe for human consumption if the bacteria count is kept down below 100 per cc. "Sanitizing" of eating utensils indicates that the articles are free of bacteria to the point where there is no health hazard connected with the use of these utensils.

On the other hand, "disinfec-

tion" implies the destruction of *all* germ life. It is around this point of complete kill, or on the other hand *almost* complete kill, that a great deal of confusion and misunderstanding has arisen concerning the application of quaternaries to practical conditions of use. Some contend that it is not necessary to kill all of the bacteria when sanitizing eating utensils, but that if the number of organisms is reduced below a certain point, there is no hazard insofar as use of these articles by humans is concerned. The other school of thought insists that a product used for sanitizing must destroy all the bacteria—in other words, must act like a disinfectant. If, for the sake of argument, we agree that a sanitizer does not have to destroy *all* of the bacteria, at just what point can a line be drawn? Results of recent tests show that quaternaries destroy about 99.99999 per cent of the bacteria when used in proper strength solutions. To the average person this would appear to be a high percentage of kill. It is—but under present regulations, a product cannot be called a disinfectant unless it destroys 100 per cent of the bacteria contacted. For this reason, quaternaries are today classed as "Sanitizers" in connection with the cleaning and rinsing of eating utensils.

Whether a sanitizer kills 95 per cent or 99.99999 per cent of the bacteria present is of little importance. It is important, however, that the number of bacteria be reduced to the point where their presence on eating utensils constitutes no health hazard. It is, universally agreed that such a count must be less than 100 by standard test,—which is comparable to the bacterial count of safe drinking water.

Those selling quaternary ammonium compounds and recommending the use of their solutions for both *sanitizing* of eating utensils and for *disinfection* of inanimate objects, should be sure the label specifically outlines the proper strength solution for each recommended use.

It has been proven that as a general rule most quaternary ammo-

nium germicides are not compatible with soap or soap solutions. Therefore, an article that is to be sanitized or disinfected with a quaternary ammonium solution should first be thoroughly cleaned, preferably with an alkaline detergent. Here again we run into another peculiarity in that there are certain alkaline detergents that are incompatible with most quaternaries. For instance, sodium metasilicate will completely void the germicidal potency of certain quaternaries and some manufacturers caution against the use of sodium tetraphosphate and sodium hexametaphosphate with their germicides.

Again speaking generally, the following alkaline detergents apparently can be used for cleaning articles to be disinfected with quaternaries with but little if any reduction of germicidal efficiency: trisodium phosphate, borax, sodium bicarbonate, tetrasodium pyrophosphate and sodium sesquicarbonate.

Apparently trisodium phosphate is most compatible with the general run of quaternary ammonium compounds. This may be due to the fact that the presence of trisodium phosphate raises the pH of the solution considerably and quaternary ammonium compounds are nearly always more active in high pH solutions than in low. Care must be taken as to the amount of phosphate or alkali that is mixed with the quaternary as an excess may lower the germicidal potency of the solution to a very great degree.

It has been shown that small amounts of soap do not seriously affect the germicidal activity of most quaternary ammonium compounds but there is no way of the average user knowing whether he has "little soap" or a "lot of soap" in his solution. And there is no method of regulating the "carry over" of soap solution from the cleaning tank into the sanitizing rinse tank.

Presence of organic matter also seems to have a decided effect on the germicidal efficiency of quaternary compounds. The solution of quaternary ammonium compound used for sanitizing purposes contains such a minute quantity of actual ger-

micide (about 1 part per 6000 parts of water) that the presence of organic matter in almost any small quantity is sufficient to absorb or inactivate the very small amount of active germicide present — another reason why articles should be cleaned of all foreign matter and rinsed before immersing in the sanitizing solution.

Therefore, for all practical purposes it is recommended that one of the compatible alkaline detergents be used in washing articles that are to be given a final sanitizing rinse with a quaternary ammonium germicide.

Testing of Quaternaries

A great deal of research has been done on testing of quaternaries. The U. S. Department of Agriculture tests products offered for sale commercially by the following methods:

- (1) The product will be tested against both *Staphylococcus aureus* and *E. typhosus* by the "F.D.A. Phenol Coefficient Method" of test with a few minor variations.
- (2) The product will then be given a "use-dilution" test to determine whether under more practical conditions the product destroys bacteria as effectively as it does under standard laboratory procedures of examination.

Concentrates

THESE cationic germicides are supplied by manufacturers in both powder and liquid forms. The powder forms are usually 100 per cent active material and can be diluted with alcohol or water (or mixtures of both) to form less concentrated germicides. Some compounders prefer to mix the 100 per cent concentrated germicide with alkaline or nonionic detergent powders, forming a dry mix that is then sold to the consumer for making germicidal solutions. To date, however, the liquid forms seem to be most popular, probably because of the ease with which they can be used and the fact that there is no mixing or dissolving to contend with insofar as the ultimate user is concerned.

Possible Applications

1. To kill or diminish effects of bacteria.

2. Eliminate mold, slimes and algae—as in swimming pool, etc.
3. Sanitize dishes, china, glassware in hotels, eating places, bars, etc.
4. Sanitize and refresh coffee urns and towels, wash cloths, etc.
5. Refreshen articles by killing bacteria causing decay and putrefaction.
6. Washing clothes, towels, diapers, sheets.
7. Garbage can deodorant; stops decay and putrefaction.
8. Counter cleaning; sanitizer and deodorant in drug stores for syrup containers, etc.
9. Sanitize and refresh refrigerators.
10. Sanitize and refresh show cases for meat, food, and delicatessen stores.
11. Dairy sanitizer and cattle wash.
12. Vegetable displays.
13. Butcher shop sanitizer and fish market.
14. Fishing and pleasure boat sanitizer and deodorant.
15. Fishing boat preservation and for preserving specimens for mounting.
16. Cold sterilization of instruments for doctors, dentists, veterinarians.
17. Cleaning wounds and skin for operations.
18. Household freshener to kill animal odors and dirt.
19. Toilet and powder room sanitizer.
20. Refrigerator and meat box sanitizer.
21. Frosted food cabinet sanitizer.
22. Vegetable counter sanitizer.
23. Sprays for chicken houses—lower bacteria count.
24. Veterinary products—animal washes, dips, etc.
25. Athletes foot preventive.
26. Killing algae in swimming pools.
27. Mixed with DDT (an emulsifier is used here).
28. Cleaning beer dispensing equipment.
29. Spraying ice used for food preservation (consult health authority).*
30. Spraying ice used for fish preservation.*
31. Eliminating mold formation on meats.*
32. Washing vegetables before home quick-freezing.*
33. Washing citrus fruits to get rid of sprays used and stop mold.*
34. Treating leather goods to diminish mold.
35. Beverage plants—sanitizing and sterilizing.
36. Killing algae in air conditioning cooling systems and refreshing air (an inhibitor is added).
37. Sanitizing barber instruments.
38. Sanitizing dips for manicuring.
39. Laundry dips for sanitizing.
40. Sanitizing bathing suits.
41. Sanitizing milk containers, food boxes, thermos bottles.
42. Cleaning meat before home freezing.*
43. Washing fruits before canning.*
44. Washing shellfish before storage.*
45. Killing slimes on ropes, sailboats, motor boats.
46. Killing sick room odors; mustiness; washing sheets, etc.

* Applications like these may require approval of local health authorities.

Estimation of Pyrethrins

By Harvey A. Seil, Ph.D.*

Seil, Putt & Rusby, Inc.

BECAUSE of indicated variations in technique in different laboratories in use of the Sell Method for the Determination of Pyrethrins, Dr. Sell has agreed to republish his method exactly as it is conducted today by him. Cooperating in this republication has been the Chemical Analysis Committee, Insecticides, Dr. George W. Fiero, Stanco, Inc., chairman, Natl. Assn. of Insecticide & Disinfectant Mfrs.—The Editors.

Method I. Determination of Pyrethrins in Pyrethrum Flowers

(1) Place 12.5 g. of finely ground pyrethrum flowers (minimum 90% through 40 mesh) into an extraction thimble. Cover the sample with a cotton plug previously washed with petroleum ether.** Extract with petroleum ether in a Soxhlet extractor. After extraction is complete (usually 6-8 hours), evaporate the petroleum ether to a volume of approximately 40 ml., stopper the flask, and place it in a refrigerator at a temperature of 0 to 5 degrees C. for at least two hours (preferably overnight).

(2) Filter the cold extract through a small piece of cotton, previously wetted with cold petroleum ether, placed in the stem of a glass funnel and collect the filtrate in a 250 ml. erlenmeyer flask. Add 20 ml. of *chilled* petroleum ether to the extraction flask. With the aid of a rubber policeman, dislodge the resinous material in the flask, swirl the contents without allowing the wash liquid to warm up appreciably, and

* With the cooperation of the Chemical Analysis Committee, Insecticide Section, NAIDM.
** Place a piece of glass rod under the thimble to assist in rapid extraction.

filter through the cotton. Repeat the operation twice using 10 ml. portions of chilled petroleum ether.

(3) Add several glass beads and remove the solvent on a water bath, without attempting to heat the residue long enough to remove the last traces of solvent.

(4) Add 15 ml. of 0.5 N ethyl alcoholic NaOH to the residue and reflux for one hour. Transfer the solution to a one liter beaker, wash the flask with two 25 ml. portions of distilled water. Add 1 ml. of deodorized kerosene.

(5) Dilute the sample with distilled water to a total volume of approximately 200 ml. Add a few glass beads and boil until the volume is reduced to approximately 150 ml. Add 1 g. of filter-cel and transfer the mixture quantitatively to a 250 ml. volumetric flask. Add 10 ml. of 10% barium chloride solution, dilute with distilled water to volume, and mix thoroughly. Filter through a fluted filter paper.

Reagents

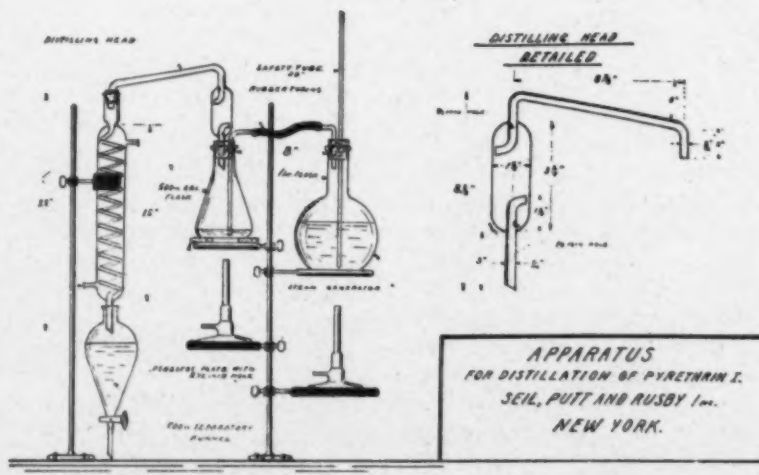
Petroleum Ether—light boiling (b.p. 20° to 40°C. at altitude where it is used.)
Phenolphthalein Test Solution
Sodium Hydroxide — 0.02 N solution, standardized daily
Alcoholic Sodium Hydroxide — 0.5 N Ethyl Alcoholic Solution
Ether—U.S.P. Grade
Sulfuric Acid—1.0 N Solution

(6) Measure exactly 200 ml. of clear filtrate and transfer quantitatively to a 500 ml. erlenmeyer flask. Add one drop of phenolphthalein, neutralize with 1.0 N sulfuric acid and add 1 ml. of the sulfuric acid in excess. Distil with steam, using apparatus shown in Figure I, until the volume remaining in the flask is approximately 20 ml. The volume of distillate should be 250 to 350 ml.

(7) To the separatory funnel add 50 ml. of neutral petroleum ether then shake thoroughly for one minute.*** After the liquids have sepa-

*** If an emulsion forms, add a few crystals of sodium chloride and shake.

Figure 1:



rated, draw off the aqueous layer into a second 500 ml. separatory funnel to which a second 50 ml. of neutral petroleum ether has been added. Shake for one minute and after the liquids have separated discard the aqueous layer. Wash the petroleum ether in the first separatory funnel by shaking with 10 ml. of water using the same wash water for the petroleum ether in the second funnel.

Repeat with a second wash water of 10 ml. as before. Combine the petroleum ether extracts in the first separatory funnel. Neutralize 15 ml. of water containing 1 drop of phenolphthalein indicator solution with 0.02 N NaOH and add it to the combined petroleum ether solutions, then titrate with 0.02 N NaOH, shaking after each addition, until the aqueous layer is just pink. Each ml. of 0.02 N NaOH consumed is equal to 0.0066 g. of Pyrethrin I. The 200 ml. aliquot taken corresponds to 10 g. of sample. Therefore the number of

$$100 \text{ ml. consumed times } 0.0066 \times \frac{10}{100}$$
 gives the percentage of Pyrethrin I.

(8) Cool the flask containing the residue from the steam distillation and filter the solution through a Gooch crucible. Wash the flask with three 10 ml. portions of water and use these successively to wash the Gooch crucible. Transfer quantitatively to a pear shaped 500 ml. (Squibb) separatory funnel. Add 5 ml. of concentrated hydrochloric acid and saturate with sodium chloride to excess. Extract the mixture by shaking thoroughly for one minute with 50 ml. of ethyl ether. Draw off the aqueous layer into a second separatory funnel and extract again with 50 ml. of ethyl ether. Continue this extraction and drawing off of aqueous layer using 25 ml. of ethyl ether for the third and fourth extractions. Wash the ether extracts by shaking successively with exactly 10 ml. of distilled water, and repeat with a second successive wash using exactly 10 ml. of distilled water.

(9) Combine the ether solutions, draw off any water that separates and filter through a plug of cotton, previously wetted with ether,

into a 250 ml. extraction or erlenmeyer flask. Wash the separatory funnel and cotton with 10 ml. of fresh ether.

Evaporate the ether on a water bath and dry the residue at 100° C. for 10 minutes. Blow gently into flask twice during the period to facilitate removal of vapors. Add 30 ml. of distilled water, boil to dissolve the residue and cool. Add a drop of phenolphthalein indicator and titrate with 0.02 N NaOH. Each ml. of 0.02 N NaOH consumed is equivalent to 0.00374 g. of pyrethrin II. The 200 ml. aliquot taken corresponds to 10 g. of sample. Therefore the number of ml. consumed

$$100 \text{ times } 0.00374 \times \frac{10}{100}$$
 gives the percentage of pyrethrin II.

Method II. Determination of Pyrethrins in Mineral Oil Sprays

(10) For flysprays not containing perfumes or other products which saponify to produce interfering organic acids, reflux 100 ml. of the spray with 15 ml. of 0.5 N ethyl alcoholic NaOH for two hours. Cool and transfer to a 500 ml. separatory funnel. Add 85 ml. of water, shake, and withdraw lower layer into a liter beaker. Shake the kerosene with four successive 25 ml. portions of water. Combine the washings and proceed as in paragraph (5) et. seq. The 200 ml. aliquot taken corresponds to 80 ml. of sample. Therefore the number of ml. of 0.02 N NaOH consumed in

$$100 \text{ paragraph (7) times } 0.0066 \times \frac{80}{100}$$

gives the grams of pyrethrin I per 100 ml. of spray. Similarly the number of ml. of 0.02 N NaOH consumed in paragraph (9) times
$$100 \text{ } 0.00374 \times \frac{80}{100}$$
 gives the grams of pyrethrin II per 100 ml.

Method III. Determination of Pyrethrins in Extracts Containing Approximately 2% of Pyrethrins

(11) Pipette a 10 ml. sample of the extract, allowing the pipette

to drain five minutes. Reflux with 15 ml. of 0.5 N ethyl alcoholic NaOH for two hours. Cool, transfer to a liter beaker, and continue as in paragraph (5) et seq. The 200 ml. aliquot taken corresponds to 8 ml. of sample. Therefore the number of ml. of 0.02 N NaOH consumed in paragraph

$$100 \text{ (7) times } 0.0066 \times \frac{100}{8}$$
 gives the

grams of pyrethrin I per 100 ml. of extract. Similarly the number of ml. of 0.02 N NaOH consumed in paragraph

$$100 \text{ (9) times } 0.00374 \times \frac{100}{8}$$
 gives the

grams of pyrethrin II per 100 ml. of extract.

Method IV. Determination of Pyrethrins in Pyrethrum Concentrates

(12) Reflux a sample containing approximately 200 mg. of pyrethrins (1 g. of 20% concentrate) with 15 ml. of 0.5 N alcoholic NaOH for two hours. Cool, transfer to a liter beaker and proceed as in paragraph (5) et seq. The 200 ml. aliquot taken corresponds to 4/5 of the sample. Therefore the number of ml. of 0.02 N NaOH consumed in paragraph

$$100 \text{ sample } \times \frac{4}{5} \text{ graph (7) times } 0.0066 \times \frac{100}{100}$$

gives the percentage of Pyrethrin I. Similarly the number of ml. of 0.02 N NaOH in paragraph (9) times
$$100$$

$$0.00374 \times \frac{100}{\text{sample } \times \frac{4}{5}}$$
 gives the percentage of pyrethrin II in the sample.

Note: Test a sample of all extracts and concentrates for freedom from oxidized pyrethrins (which are insecticidally inert) by diluting to approximately 200 mg. of pyrethrins per 100 ml. with petroleum ether. If the solution is not clear, treat the analytical sample in the same manner adding 1 g. of filter cel to the solution. Place flask in refrigerator for at least two hours, filter and wash quantitatively through a Gooch crucible. Evaporate the solvent, proceed as in paragraph (11) or (12).



BAC-TROL

The Aristocrat of Disinfectants

**FOR All-Season USE
FOR All-Season SALES**

BAC-TROL is a powerful bacteria-killing disinfectant with a most refreshing, delicate odor. It has a wide range of uses everywhere throughout the four seasons of the year.

BAC-TROL is 5 times as strong as pure carbolic acid in germicidal strength, yet is perfectly safe to use. It is ideal for general use in the home, institution, hospital, and very effective when used in air-conditioning systems.

Baird & McGuire, Inc., private label service covers BAC-TROL in coefficients 3 and 5. Labels are free when specified amounts are ordered.

BAC-TROL is a Baird Certified Product, dependable in all respects.



Baird & McGuire, Inc.
HOLBROOK, MASSACHUSETTS

Serving the Industry for Over 38 Years

New Federal Insecticide Act

(H. R. 1237)

AN ACT

TO regulate the marketing of economic poisons and devices, and for other purposes.

TITLE

SECTION 1. This Act may be cited as the "Federal Insecticide, Fungicide, and Rodenticide Act."

DEFINITIONS

SEC. 2. For the purposes of this Act—

a. The term "economic poison" means any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any insects, rodents, fungi, weeds, and other forms of plant or animal life or viruses, except on or in living man or other animals, which the Secretary shall declare to be a pest.

b. The term "device" means any instrument or contrivance intended for trapping, destroying, repelling, or mitigating insects or rodents or destroying, repelling, or mitigating fungi or such other pests as may be designated by the Secretary, but not including equipment used for the application of economic poisons when sold separately therefrom.

c. The term "insecticide" means any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any insects which may be present in any environment whatsoever.

d. The term "fungicide" means any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any fungi.

e. The term "rodenticide" means any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating rodents or any other vertebrate animal which the Secretary shall declare to be a pest.

f. The term "herbicide" means any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any weed.

g. The term "weed" means any plant which grows where not wanted.

h. The term "insect" means any of the numerous small invertebrate animals generally having the body more or less obviously segmented for the most part belonging to the class insecta, comprising six-legged usually winged forms, as, for example, beetles, bugs, bees, flies, and to other allied classes of arthropods whose

members are wingless and usually have more than six legs, as, for example, spiders, mites, ticks, centipedes, and wood lice.

i. The term "fungi" means all non-chlorophyll-bearing thallophytes (that is, all non-chlorophyll-bearing plants of a lower order than mosses and liverworts), as, for example, rusts, smuts, mildews, molds, yeasts, and bacteria, except those on or in living man or other animals.

j. The term "ingredient statement" means either—

(1) a statement of the name and percentage of each active ingredient, together with the total percentage of the inert ingredients in the economic poison; or

(2) a statement of the name of each active ingredient, together with the name of each and total percentage of the inert ingredients, if any there be, in the economic poison (except option 1 shall apply if the preparation is highly toxic to man, determined as provided in section 6 of this Act);

and, in addition to (1) or (2) in case the economic poison contains arsenic in any form, a statement of the percentages of total and water soluble arsenic, each calculated as elemental arsenic.

k. The term "active ingredient" means an ingredient which will prevent, destroy, repel, or mitigate insects, fungi, rodents, weeds or other pests.

l. The term "inert ingredient" means an ingredient which is not active.

m. The term "antidote" means a practical immediate treatment in case of poisoning and includes first-aid treatment.

n. The term "person" means any individual, partnership, association, corporation, or any organized group of persons whether incorporated or not.

o. The term "Territory" means any Territory or possession of the United States, excluding the Canal Zone.

p. The term "Secretary" means the

Secretary of Agriculture.

q. The term "registrant" means the person registering any economic poison pursuant to the provisions of this Act.

r. The term "label" means the written, printed, or graphic matter on, or attached to, the economic poison or device or the immediate container thereof, and the outside container or wrapper of the retail package, if any there be, of the economic poison or device.

s. The term "labeling" means all labels and other written, printed, or graphic matter—

(1) upon the economic poison or device or any of its containers or wrappers;

(2) accompanying the economic poison or device at any time;

(3) to which reference is made on the label or in literature accompanying the economic poison or device, except to current official publications of the United States Departments of Agriculture and Interior, the United States Public Health Service, State experiment Stations, State agricultural colleges, and other similar Federal or State institutions or agencies authorized by law to conduct research in the field of economic poisons;

t. the term "adulterated" shall apply to any economic poison if its strength or purity falls below the professed standard or quality as expressed on its labeling or under which it is sold, or if any substance has been substituted wholly or in part for the article, or if any valuable constituent of the article has been wholly or in part abstracted.

u. The term "misbranded" shall apply—

(1) to any economic poison or device if its labeling bears any statement, design, or graphic representation relative thereto or to its ingredients which is false or misleading in any particular;

(2) to any economic poison—

(a) if it is an imitation of or is offered for sale under the name of another economic poison;

(b) if its labeling bears any reference to registration under this Act;

(c) if the labeling accompanying it does not contain directions for use which are necessary and if complied with adequate for the protection of the public;

(d) if the label does not contain a warning or caution statement which may be necessary and if complied with adequate to prevent injury to living man and other vertebrate animals, vegetation, and useful invertebrate animals;

(e) if the label does not bear an ingredient statement on that part of the immediate container and on the outside container or wrapper, if there be one, through which the ingredient statement on the immediate container cannot be clearly read, of the retail package which is presented or displayed under customary conditions of purchase: *Provided*, That the Secretary may permit the ingredient statement to appear prominently on some other part of the container, if the size or form of the container makes it impracticable to place it on the part of the retail package which is presented or displayed under customary conditions of purchase.

(f) if any word, statement, or other information required by or under authority of this Act to appear on the label or labeling is not prominently placed thereon with such conspicuousness (as compared with other words, statements, designs, or graphic matter in the labeling) and in such terms as to render it likely to be read and understood by the ordinary individual under customary conditions of purchase and use; or

(g) if in the case of an insecticide, fungicide, or herbicide when used as directed or in accordance with commonly recognized practice it shall be injurious to living man or other vertebrate animals, or vegetation, except weeds, to which it is applied, or to the person applying such economic poison.

PROHIBITED ACTS

SEC. 3. (a) It shall be unlawful for any person to distribute, sell, or offer for sale in any Territory or in the District of Columbia, or to ship or deliver for shipment from any State, Territory, or the District of Columbia to any other State, Territory,

or the District of Columbia, or to any foreign country, or to receive in any State, Territory, or the District of Columbia from any other State, Territory, or the District of Columbia, or foreign country, and having so received, deliver or offer to deliver in the original unbroken package to any other person, any of the following:

(1) Any economic poison which has not been registered pursuant to the provisions of section 4 of this Act, or any economic poison if any of the claims made for it or any of the directions for its use differ in substance from the representations made in connection with its registration, or if the composition of an economic poison differs from its composition as represented in connection with its registration: *Provided*, That in the discretion of the Secretary, a change in the labeling or formula of an economic poison may be made within a registration period without requiring reregistration of the product.

(2) Any economic poison unless it is in the registrant's or the manufacturer's unbroken immediate container, and there is affixed to such container, and to the outside container or wrapper of the retail package, if there be one through which the required information on the immediate container cannot be clearly read, a label bearing—

(a) the name and address of the manufacturer, registrant, or person for whom manufactured;

(b) the name, brand, or trademark under which said article is sold; and

(c) the net weight or measure of the content: *Provided*, That the Secretary may permit reasonable variations.

(3) Any economic poison which contains any substance or substances in quantities highly toxic to man, determined as provided in section 6 of this Act, unless the label shall bear, in addition to any other matter required by this Act—

(a) the skull and crossbones;

(b) the word "poison" prominently (IN RED) on a background of distinctly contrasting color; and

(c) a statement of an antidote for the economic poison.

(4) The economic poisons commonly known as standard lead arsenate, basic lead arsenate, calcium arsenate, magnesium arsenate, zinc arsenate, zinc arsenite, sodium fluoride, sodium fluosilicate, and barium fluosilicate unless they have been distinctly colored or discolored as provided by regulations issued in accordance with this Act, or any other white powder economic poison which the Secretary, after investigation of and after public hearing on the necessity for such action for the protection of the public health and

the feasibility of such coloration or discoloration, shall, by regulation, require to be distinctly colored or discolored, unless it has been so colored or discolored: *Provided*, That the Secretary may exempt any economic poison to the extent that it is intended for a particular use or uses from the coloring or discoloring required or authorized by this section if he determines that such coloring or discoloring for such use or uses is not necessary for the protection of the public health.

(5) Any economic poison which is adulterated or misbranded or any device which is misbranded.

b. Notwithstanding any other provision of this Act, no article shall be deemed in violation of this Act when intended solely for export to any foreign country and prepared or packed accordingly to the specifications or directions of the foreign purchaser.

c. It shall be unlawful—

(1) for any person to detach, alter, deface, or destroy, in whole or in part, any label or labeling provided for in this Act or the rules and regulations promulgated hereunder, or to add any substance to, or take any substance from, an economic poison in a manner that may defeat the purpose of this Act;

(2) for any manufacturer, distributor, dealer, carrier, or other person to refuse, upon a request in writing specifying the nature or kind of economic poison or device to which such request relates, to furnish to or permit any person designated by the Secretary to have access to and to copy such records as authorized by section 5 of this Act;

(3) for any person to give a guaranty or undertaking provided for in section 7 which is false in any particular, except that a person who receives and relies upon a guaranty authorized under section 7 may give a guaranty to the same effect, which guaranty shall contain in addition to his own name and address the name and address of the person residing in the United States from whom he received the guaranty or undertaking; and

(4) for any person to use for his own advantage or to reveal, other than to the Secretary, or officials or employees of the United States Department of Agriculture, or other Federal agencies, or to the courts in response to a subpoena, or to physicians, and in emergencies to pharmacists and other qualified persons, for use in the preparation of antidotes, in accordance with such directions as the Secretary may prescribe, any information relative to formulas of products acquired by authority of section 4 of this Act.

REGISTRATION

SEC. 4. a. Every economic poison which is distributed, sold, or offered for sale in any Territory or the District of Columbia, or which is shipped or delivered for shipment from any State, Territory, or the District of Columbia to any other State, Territory, or the District of Columbia, or which is received from any foreign country shall be registered with the Secretary: *Provided*, That products which have the same formula, are manufactured by the same person, the labeling of which contains the same claims, and the labels of which bear a designation identifying the product as the same economic poison may be registered as a single economic poison; and additional names and labels shall be added by supplement statements; the registrant shall file with the Secretary a statement including—

(1) the name and address of the registrant and the name and address of the person whose name will appear on the label, if other than the registrant;

(2) the name of the economic poison;

(3) a complete copy of the labeling accompanying the economic poison and a statement of all claims to be made for it, including the directions for use; and

(4) if requested by the Secretary, a full description of the tests made and the results thereof upon which the claims are based.

b. The Secretary, whenever he deems it necessary for the effective administration of this Act, may require the submission of the complete formula of the economic poison. If it appears to the Secretary that the composition of the article is such as to warrant the proposed claims for it and if the article and its labeling and other material required to be submitted comply with the requirements of section 3 of this Act, he shall register it.

c. If it does not appear to the Secretary that the article is such as to warrant the proposed claims for it or if the article and its labeling and other material required to be submitted do not comply with the provisions of this Act, he shall notify the registrant of the manner in which the article, labeling, or other material required to be submitted fail to comply with the Act so as to afford the registrant an opportunity to make the corrections necessary. If, upon receipt of such notice, the registrant insists that such corrections are not necessary and requests in writing that it be registered, the Secretary shall register the article, under protest, and such registration shall be accompanied by a warning, in writing, to the registrant of the apparent failure of the article to comply with the provisions of this Act. In order to protect the public, the Secretary,

on his own motion, may at any time, cancel the registration of an economic poison and in lieu thereof issue a registration under protest in accordance with the foregoing procedure. In no event shall registration of an article, whether or not protested, be construed as a defense for the commission of any offense prohibited under section 3 of this Act.

d. Notwithstanding any other provision of this Act, registration is not required in the case of an economic poison shipped from one plant to another plant operated by the same person and used solely at such plant as a constituent part to make an economic poison which is registered under this Act.

e. The Secretary is authorized to cancel the registration of any economic poison at the end of a period of five years following the registration of such economic poison or at the end of any five-year period thereafter, unless the registrant, prior to the expiration of each such five-year period, requests in accordance with the regulations issued by the Secretary that such registration be continued in effect.

BOOKS AND RECORDS

SEC. 5. For the purposes of enforcing the provisions of this Act, any manufacturer, distributor, carrier, dealer, or any other person who sells or offers for sale, delivers or offers for delivery, or who receives or holds any economic poison or device subject to this Act, shall, upon request of any employee of the United States Department of Agriculture or any employee of any State, Territory, or political subdivision, duly designated by the Secretary, furnish or permit such person at all reasonable times to have access to, and to copy all records showing the delivery, movement, or holding of such economic poison or device, including the quantity, the date of shipment and receipt, and the name of the consignor and consignee; and in the event of the inability of any person to produce records containing such information, all other records and information relating to such delivery, movement, or holding of the economic poison or device. Notwithstanding this provision, however, the specific evidence obtained under this section shall not be used in a criminal prosecution of the person from whom obtained.

ENFORCEMENT

SEC. 6. a. The Secretary (except as otherwise provided in this section) is authorized to make rules and regulations for carrying out the provisions of this Act, including the collection and examination of samples of economic poisons and devices subject to this Act and the determination and establishment of suitable names to be used in the ingredient statement. The Secretary is, in addition, authorized after opportunity for hearing—

(1) to declare a pest any form of plant or animal life or virus which is

injurious to plants, man, domestic animals, articles, or substances;

(2) to determine economic poisons, and quantities of substances contained in economic poisons, which are highly toxic to man; and

(3) to determine standards of coloring or discoloring for economic poisons, and to subject economic poisons to the requirements of section 3a (4) of this Act.

b. The Secretary of the Treasury and the Secretary of Agriculture shall jointly prescribe regulations for the enforcement of section 10 of this Act.

c. The examination of economic poisons or devices shall be made in the United States Department of Agriculture or elsewhere as the Secretary may designate for the purpose of determining from such examination whether they comply with the requirements of this Act, and if it shall appear from any such examination that they fail to comply with the requirements of this Act, the Secretary shall cause notice to be given to the person against whom criminal proceedings are contemplated. Any person so notified shall be given an opportunity to present his views, either orally or in writing, with regard to such contemplated proceedings, and if in the opinion of the Secretary it appears that the provisions of this Act have been violated by such person, then the Secretary shall certify the facts to the proper United States attorney, with a copy of the results of the analysis or the examination of such article: *Provided*, That nothing in this Act shall be construed as requiring the Secretary to report for prosecution or for the institution of libel proceedings minor violations of this Act whenever he believes that the public interest will be adequately served by a suitable written notice of warning.

d. It shall be the duty of each United States attorney, to whom the Secretary or his agents shall report any violation of this Act, to cause appropriate proceedings to be commenced and prosecuted in the proper courts of the United States without delay.

e. The Secretary shall, by publication in such manner as he may prescribe, give notice of all judgments entered in actions instituted under the authority of this Act.

EXEMPTIONS

SEC. 7. a. The penalties provided for a violation of section 3a of this Act shall not apply to—

(1) any person who establishes a guaranty signed by, and containing the name and address of, the registrant or person residing in the United States from whom he purchased and received in good faith the article in the same unbroken package, to the

(Turn to Page 230)

Antiseptic, Disinfectant Terminology

B4

AUSTIN M. PATTERSON, PH. D.

Antioch College, Yellow Springs, O.

THE use of technical and semi-technical words in commerce has increased rapidly with the development of research and the growth of advertising. The modern market affords an amazing variety of articles, the manufacture, merits, and use of which are discussed in a voluminous literature.

It is desirable that the scientific terms employed should convey clear meanings to all concerned, or at least not give a wrong understanding. Words do not always have one simple sense. A language is a living, growing organism, and its words take on color, gain fresh content, acquire new senses and lose old ones as the years pass. It is the task of the dictionary worker to discover and set forth the present meanings of words in the light of their history.

In this article definitions and comments are presented for the following terms: antiseptic, bactericidal, bactericide, deodorant, deodorize, disinfect, disinfectant, disinfection, disinfest, germicidal, germicide, insecticidal, insecticide, prophylactic, sterilization, and sterilize.

The conclusions are based chiefly on a study of the more widely disseminated literature in English, especially reference books both scientific and general, but also on conversations and correspondence with physicians, bacteriologists, government officials, manufacturers of chemicals, and laymen.

GERMICIDE, -DAL

Definitions—

germicide, *n.* Anything that destroys

* Reprinted from American Journal of Public Health, Vol. XXII, No. 5, May 1932. The investigation herein reported was conducted with the aid of a grant from The National Association of Insecticide and Disinfectant Manufacturers.

germs (microorganisms); applied especially to agents that kill disease germs.

germicidal, *adj.* Destroying germs; pertaining to germicides.

Comments—The word *germ** in the sense of microorganism, is a popular one, but it has been used in forming the convenient terms *germicide* and *germicidal*, which find extensive use in technical, as well as popular literature. There seems to be little disagreement as to the meaning of these terms: a substance is a *germicide* if it will kill germs and whether or not it will do so can be experimentally determined. As the words are ordinarily used, the germs referred to are those of disease. The chief point of controversy that could arise is with reference to differences in resistance. In practice it is assumed that a substance represented as a *germicide*, when used as directed, will kill all ordinary disease germs, but is not necessarily required to be capable of destroying bacterial spores. In combating diseases such as anthrax or tetanus, caused by spore-forming bacteria, germicides or procedures specially effective against spores will be required.

BACTERICIDE, -DAL

Definitions—

bactericide, *n.* Anything that destroys bacteria.

bactericidal, *adj.* Destroying bacteria; pertaining to bactericides.

Comments—These terms are synonymous in large part with *germicide* and *germicidal*, the chief difference being that the two latter are somewhat broader, inasmuch as they may include microorganisms other than bacteria. *Bactericide* is a precise term applying only to bacteria and to bacteria of all kinds; in practice, however, it is ordinarily regarded in the same light as *germicide* with respect to the resistance of different bacteria; that is, a substance, in order to be called a *bactericide*, is not necessarily required to be capable of destroying bacterial spores.

ANTISEPTIC

Definitions—

antiseptic, *n.* A substance that opposes sepsis, putrefaction or decay; one that prevents or arrests the growth or action of microorganisms, either by inhibiting their activity or by destroying them; used

especially of agents applied to living tissue.

antiseptic, *adj.* 1. Having the properties of an antiseptic; opposing sepsis, putrefaction or decay; preventing or arresting the growth or action of microorganisms, especially on or in living tissue. 2. Pertaining to, or characterized by, the use of antiseptics; as *antiseptic surgery*.

Comments—The word *antiseptic* is derived from two Greek words, *anti*, against, and *septikos*, putrefactive or rotting. The first known use of it in English, both as an adjective and as a noun, is (according to the *Oxford English Dictionary*) in the *Gentleman's Magazine* in 1751, where sea salt, myrrh and acids are spoken of as antiseptics. In 1774 Priestley remarked on the antiseptic power of "nitrous air" (nitrous oxide). At the time that the word came into existence it was not understood that putrefaction and decay are produced by the agency of microorganisms, but when this became known, the "preventing or arresting the growth or action of microorganisms" took its place naturally in the idea conveyed by the word. Apparently the earliest use of the term was with reference to substances to be applied as medicaments to sores and wounds, and the principal use even today is of substances applied to some part of the body, either externally or internally. The word *antiseptic* might be, and has been, applied to substances used to prevent decay in other connections, as of foods or timber, but such materials are usually called *preservatives* rather than antiseptics. It will be noticed that, as "antiseptic" is used, it may imply long-continued contact.

Antiseptic and Germicide—Since the killing of microorganisms is the most effective way to prevent their growth it would seem a logical conclusion that any germicide may act as an antiseptic. This appears to be the prevailing view. A great many writers who discuss the matter state or imply that an antiseptic may act either by inhibiting the growth of microorganisms or by killing them. A smaller number, however, limit the action of an antiseptic to the prevention or arresting of bacterial growth *without* killing the organisms.

Now it is quite natural that, since we have other words such as *germicide* and *bactericide* to denote agents which actually kill microorganisms, the idea that an antiseptic may arrest growth without kill-

ing should be emphasized; but the majority of writers do not go as far as to contrast *antiseptic* with *germicide* and to regard the two terms as mutually exclusive. It seems best in accord with the history of the word and with prevailing usage to apply the term *antiseptic* to any agent which prevents further bacterial action, whether it does so by killing the bacteria or not. If this view be taken, any germicide might theoretically serve as an antiseptic. In practice there are exceptions. The action of certain non-material agencies, as sunlight and heat, is often referred to as germicidal but not as antiseptic. Again, many germicides cannot be used as antiseptics because of their harmful effect upon the body tissues. Bearing such exceptions in mind, however, we may say that in general a germicide is an antiseptic or has antiseptic properties.

On the other hand, it is not correct to say that an antiseptic is necessarily a germicide or has germicidal properties, for there are substances which are able to arrest the growth of microorganisms but are not germicides. Here again usage is not unanimous, for certain writers, chiefly those influenced by the practice of antiseptic surgery introduced by Lister, regard the action of antiseptics as a destroying one.

In an investigation of the relative number of authorities supporting each point of view, 165 definitions of *antiseptic* were studied, ranging in date from 1819 to 1930. Twenty, mostly early, make no reference to bacteria. Of the remainder, 66 state or imply that antiseptics arrest or destroy microorganisms, 27 state that they arrest but do not destroy, 12 that they destroy, and 10 that they inhibit growth (without stating how). Most of the remaining 30 definitions are not entirely clear, though a few represent divergent views, for example, that antiseptics neutralize toxins.

To illustrate recent usage on this point, 53 citations from works published in 1921 or later may be summarized as follows: (1) Describing an antiseptic as inhibiting or preventing the growth of microorganisms without necessarily killing them, 37. Of these, 12 are from bacteriological, 11 from medical, and 14 from miscellaneous sources. Three say definitely that antiseptics do not kill bacteria and 4 more distinguish between antiseptic action as non-killing and disinfectant action as killing; the rest either say or imply that antiseptics may kill or else do not mention the question. (2) Stating that antiseptics destroy bacteria, 6. Of these, 2 are from surgeons, 1 is from a chemical dictionary which quotes alcohol and boric acid as examples, and 1 considers the "inhibiting" sense preferable. (3) Not giving a clear issue, or controversial, 10.

It should be remembered that whether a given substance is a germicide or an antiseptic, or neither, depends on several factors. One is the *strength* in which the agent is used; it may be a germicide in a solution of a certain concentration and only an inhibiting agent at a lower concentration. The *time of contact* and *mode*

of application must also be taken into account; a solution which is germicidal when in contact with the material for 30 minutes may not be so for an exposure of 5 minutes, and imperfect contact of course lessens effectiveness. The *nature of the microorganism* must also be considered, since the resistance of different kinds varies greatly, so that a substance might be germicidal for one variety and only inhibitory toward another, within a definite range of concentration. And there are still other factors, such as the *temperature*, the *abundance of the microorganisms* and the *nature of the material* in which the microorganisms are found.

DISINFECTANT, -TANT, -TION

Definitions—

disinfectant, *n.* An agent that frees from infection; usually, a chemical agent which destroys disease germs or other harmful microorganisms (but not, ordinarily, bacterial spores); commonly used of substances applied to inanimate objects.

disinfectant, *adj.* Freeing from infection, especially by destroying disease germs or other harmful microorganisms.

disinfect, *v.t.* To free from infection, especially by destroying disease germs or other harmful microorganisms.

disinfection, *n.* The act or process of disinfecting.

Comments—The verb *disinfect* first appears in the literature at about the beginning of the 17th century, and the other forms much later. Like *antiseptic*, this group of words came into use before the germ theory of disease originated. It was believed that certain "effluvia" existed in the air and on furniture, clothing, etc., and communicated certain diseases; hence, the infection must either be removed or destroyed. It is now recognized that the infection is caused by microorganisms, but we continue to use *disinfectant* as a convenient term for any agent that accomplishes the result of freeing from infection.

Wilcox (*Pharmacology and Therapeutics*, ed. 7, p. 13) states that "the term *disinfectant*, by extension, is applied to those agents which kill non-pathogenic bacteria, as well as to those which destroy disease germs." This, it seems, involves an extension of the meaning of the word "disinfection" to include freeing from other undesirable microorganisms besides those causing human disease.

Disinfectant and Germicide—For some time after the advent of the germ theory of disease, authors hesitated to describe the action of a disinfectant as being wholly or principally the destruction of microorganisms. They spoke of "restraining" or "neutralizing" the germs, of destroying the poisons produced, of deodorizing, etc. It would seem that their idea of "ridding of infection" was clear but not the precise method by which disinfectants operate.

Popularly this vagueness persisted much longer. Albert Buck (*Reference Handbook of the Medical Sciences*, 1894) says: "Popularly, the term *disinfection* is used in a much broader sense. Any chemical agent which destroys or masks bad odors, or which arrests putrefactive decomposition, is spoken of as a *disinfectant* . . . This popular use of the term has led to much misapprehension." This misapprehension seems to have decreased with the spread of scientific knowledge.

Of 143 definitions of "disinfectants," dating from 1854 to 1930, 25 (chiefly of earlier dates) make no reference to microorganisms. Of the remainder, 95 define disinfectants as germ destroyers, 9 state that they may also act by removing the germs, and 8 say that they either destroy germs or arrest their action. Of the 95 citations, 52 define disinfectants as destroyers of *disease germs*, 34 merely say that they destroy germs or are germicides, while 9 specifically state that they destroy all germs, non-pathogenic as well as pathogenic.

Hence it seems to be generally expected that any substance used as a disinfectant will destroy the cause of infection, that is, will act as a germicide.

The word *disinfectant* still carries with it much of its original connotation. It suggests the cleaning of sick rooms, clothing, bedding, lavatories, stables and in fact of any places or things that might harbor disease. By contrast, *germicide* is a precise, colorless word, conveying its literal meaning and little more. Aside from their history and connotations, however, *disinfectant* and *germicide* appear today to have the same meaning when applied to substances used in fighting disease.

Disinfectant and Antiseptic—If we accept certain conclusions from the above discussion, namely, that the substances called disinfectants are germicides, and also that in general germicides may act as antiseptics but that antiseptics are not necessarily germicides, then it follows that disinfectants may (theoretically at least) act as antiseptics, but that antiseptics may not necessarily act as disinfectants. Due attention should of course be paid to the different connections in which the two words are used.

STERILIZE, -ZATION

sterilize, *v.t.* To render sterile, that is, free from all living microorganisms.

sterilization, *n.* The act or process of sterilizing, or freeing from all living microorganisms.

Comments—These are exact terms, which came into use (in the sense under discussion) to express a precise idea, namely the freeing of a material, container, or space from living microorganisms of all kinds. There is no distinction between disease germs and other germs, or between resistant and nonresistant varieties or forms. If a thing has been

(Turn to Page 213)



Better

FOR SOAPS AND DISINFECTANTS

U.S.P. CRESOL
CRESYLIC ACID
U.S.P. PHENOL
TAR ACID OIL
NAPHTHALENE
PARACHLOROMETACRESOL
CHLOROXYLENOL
PYRIDINE
XYLENE
HI-FLASH SOLVENT
ANHYDROUS AMMONIA

* Reg. U. S. Pat. Off.



THE BARRETT DIVISION
Allied Chemical & Dye Corporation
40 Rector Street, New York 6, N. Y.

N.A.I.D.M. SPECIFICATIONS

Official Specifications of the National Association
of Insecticide and Disinfectant Manufacturers for

INSECTICIDES and DISINFECTANTS

OFFICIAL SPECIFICATIONS Liquid Household Spray Insecticide

(Adopted December, 1936)

1. A household spray oil type insecticide shall be harmless to man and warm blooded household animals, when used as directed.

2. When sprayed, as directed, it shall not stain fabrics, wall paper and general household furnishings, that are not stained by dry cleaning fluid.

3. When used in the customary manner it shall not contaminate closed packages of food materials commonly found in homes.

4. It shall not corrode metals.

5. It shall have no objectionable odor, and no particular odor shall be specified.

6. It shall have a flashpoint not less than 125° F. when tested in the Tagliabue closed cup.

7. It is recommended that it be purchased on a direct competitive basis with the Official Test Insecticide of the National Association of Insecticide and Disinfectant Manufacturers, Inc., by using the method of test specified in literature accompanying the Official Test Insecticide.

8. The Association hereby adopts the following grades (the plus or minus figures shown therein designating the points over or under the Official Test Control Insecticide when the "Unknown" and the "Control" are tested at the same time in the same manner):

Designation	Grade	Kill Classification
AA	Excellent	+ 16 or higher
A	Very Good	+ 6 to + 15
B	Equal to Official Test Insecticide	+ 5 to — 5

1: Standard Specifications for Liquid Hypochlorites Disinfectant, Deodorant and Germicide

Composition—Liquid hypochlorites are available in three forms: *one*, sodium hypochlorite alkaline with sodium hydrate, sodium carbonate or the other alkaline salts; *two*, hypochlorites which are essentially sodium hypochlorite and alkaline with calcium hydrate; and *three*, calcium hypochlorite solutions alkaline with calcium hydrate. A delivery of any one of these shall be satisfactory unless otherwise specified.

Physical Requirements — The hypochlorite solution shall be a homogeneous liquid. It shall be miscible with water of zero hardness at 20° C. (68° F.) in all proportions. It shall be ready for dilution when delivered.

Chemical Requirements—The available chlorine content which shall not be less than 2.5 per cent by weight shall be clearly stated on the label. Its rate of deterioration shall not be more than 10 per cent of its original available chlorine content when stored in the original container for six months in a cool, dark place at maximum temperature of 68° F. (20° C.).

Identification—Each container shall be marked with the name of the material, the brand (if any) of the material, the name of the manufacturer, net contents therein, and date of manufacture.

Packing—The hypochlorite shall be delivered in standard commercial containers of the size as called for in the schedule. Each container holding one gallon or more shall be stoppered with a closure having vent.

2: Standard Specifications for Pine Oil Disinfectant

1. The product shall be manufactured from pure steam distilled pine oil and emulsifying agent and remain clear and homogeneous under normal and reasonable conditions of storage.

2. It shall contain not less than 60 per cent by weight steam distilled pine oil.

3. It shall contain not more than 10 per cent water.

4. The phenol coefficient shall be determined by the F.D.A. Method of Test against *B. typhosus* and be clearly stated on the label attached to each shipping container.

5. It shall not contain kerosene or other petroleum distillates.

6. The product shall make a stable emulsion in water of zero hardness at 20° C. (68° F.) when diluted at the rate of 5 per cent. The emulsion shall stand for at least twenty-four hours showing no sign of oil float (unsaponified or clear free oil).

3: Standard Specifications for Emulsifying Type Coal Tar Disinfectant

1. It shall be made from phenols of coal tar or petroleum origin, or combina-

tions of such phenols with coal tar oils, and an emulsifying agent.

2. It shall contain not less than 65 per cent by weight of phenols and coal tar oils.

3. It shall contain not over 10 per cent of water, by weight.

4. It shall not contain kerosene or any petroleum distillates other than phenols of petroleum origin.

5. The phenol coefficient shall be determined by the Food and Drug Administration Method using *B. typhosus* as test organism, and shall be clearly stated on the label attached to each shipping container.¹

6. It shall make milky emulsions with water of zero hardness at 20° C. (68° F.) when diluted in the ratio of 5 parts of disinfectant to 95 parts of water for disinfectants having phenol coefficients of 10 or under; and in the ratio of 2 parts of disinfectant to 98 parts of water for disinfectants having phenol coefficients of over 10. These emulsions shall show not more than a trace of oily float or sediment when stored for 5 hours at room temperature.

7. It shall remain limpid, showing no sign of naphthalene crystallization down to 0° C. in 3 hours.

8. It shall contain less than 5 per cent of benzophenol.

9. The disinfectant, under normal and reasonable conditions of storage, shall remain stable and show no loss of germicidal value.

Certification and Labeling

10. The following form of statement on labels², invoices, etc., is recommended:

"TheCompany certifies this phenolic disinfectant (emulsifying type) to conform to all requirements of the standard adopted by the NATIONAL ASSOCIATION OF INSECTICIDE AND DISINFECTANT MANUFACTURERS, INC., and recorded as Commercial Standard CS70-.... by the National Bureau of Standards of the U. S. Department of Commerce.
Phenol coefficient....."

¹ This type of disinfectant is available with phenol coefficients ranging from 2 to 30, and higher. Contract buyers should specify the phenol coefficient desired.

² When used on labels this statement is in addition to, and not in lieu of, the ingredient statement required by the Insecticide Act of 1916.

Chemical Products Recognized for DEPENDABILITY



The reputation of your firm can only be as good as the service you render and the products you sell. We leave no room for doubt as to the quality and performance of the products of James Varley & Sons.

Each and every one is backed by sound research in one of the country's most complete and modern laboratories, quality control in each step of production and over a third of a century's experience in the manufacture of dependable chemical products.

Sold in bulk or under your own private label.

Write for prices and complete technical data on any of these products listed. Your inquiries will receive a prompt reply.

DISINFECTANTS:

Coal Tar
Pine Oil
Synthetic Phenol
Quaternary
Cresylic-Cresol
Beta-Trol Germicide
Arsenical Dip, B. A. I.

INSECTICIDES:

Concentrates
Synthetics
Roach Sprays—Fly Sprays
DDT—Cattle Sprays
Mosquito Larvaecide

RAW MATERIALS, Cresylic Acids, Imported and Domestic:

Crude Carbolic Acids
Tar Acid Oils
Creosote Oils
Shingle Stain Oil
Nev-A-Rot Stainless
Pentachlorophenol Concentrates

WEED KILLERS, 2, 4-D Amino Salts and Esters:

Arsenical types

HOSPITAL GERMICIDES:

Cresol Compound U. S. P.
50% Technical Cresylic Solution
Cre-O-Syn Surgical Disinfectant
HD-10 Germicide

FLOOR CLEANERS:

SS-96 Liquid Soapless Detergent
SS-96 Powdered Soapless Detergent
Special Cleaner
TMT Cleaner
Scrubbing Compounds

ALLIED PRODUCTS:

Cool Creme Lotion Soap
Motor Cleaners
Degreasers
Laundry Compounds
Glass Rinse
Liquid Bowl Cleaner

Most Types Popular Steam,
Electric and Vaporizing Units Available
for Immediate Shipment.

Contact Our Private Formula Division For
Chemical Specialties Not Listed Above.



James Varley & Sons INC

Formerly
BAIRD &
McGUIRE, INC
of St. Louis, Mo.

1200 SWITZER AVENUE
SAINT LOUIS 15, MO.

4: Standard Specifications for Cresylic Disinfectants

Scope

1. This standard covers materials, physical and chemical properties, and certification of quality of phenolic disinfectant (soluble type), classified under two groups as follows:

(a) Group I—Phenolic disinfectants having phenol coefficients from 1.5 to 5¹.

(b) Group II—Phenolic disinfectants having phenol coefficients above 5.

Detail Requirements (Group I)

2. Group I disinfectants shall be made from cresol or cresylic acid of coal tar or petroleum origin, and a dissolving agent.

3. Group I disinfectants shall contain not less than 50 per cent of cresol or cresylic acid, as determined by the method prescribed in U. S. Pharmacopoeia XI for the assay of cresol in the Saponated Solution of Cresol.

4. Group I disinfectants shall contain not more than 25 per cent by weight of inert ingredients (water plus glycerine, and organic solvents, if any).

5. The phenol coefficient of Group I disinfectants shall be determined by the Food and Drug Administration Method using *B. typhosus* as the test-organism, and shall be clearly stated on the label attached to each shipping container.

6. Group I disinfectants shall contain less than 5 per cent of benzophenol.

7. Group I disinfectants shall make clear solutions with water of zero hardness at 20° C. (68° F.) within the concentration range of from 1 to 4 per cent; such solutions, when kept in closed containers, shall remain either practically clear or become only slightly opalescent when allowed to stand for 24 hours at 20° C. (68° F.) away from direct light.

8. Group I disinfectants shall show no soap separation when cooled down to 0° C. and held at this temperature for 3 hours.

Detail Requirements (Group II)

9. Group II disinfectants shall be made from phenols of coal tar or petroleum origin, and a dissolving agent.

10. Group II disinfectants shall contain not less than 50 per cent of phenols².

11. Group II disinfectants shall contain not more than 25 per cent by weight of inert ingredients (water plus glycerine and organic solvents, if any).

12. The phenol coefficients of Group II disinfectants shall be determined by the Food and Drug Administration Method using *B. typhosus* as the test-organism,

¹ The disinfectants of Group I fall within the type commonly designated "Cresylic disinfectants."

² A satisfactory method of assay of all possible types of disinfectants comprised by Group II is not available, but work on the subject is in progress.

³ When used on labels, this statement is in addition to, and not in lieu of, the ingredient statement required by the Insecticide Act of 1910.

and shall be clearly stated on the label attached to each shipping container.

13. Group II disinfectants shall contain less than 5 per cent of benzophenol.

14. Group II disinfectants shall make clear solutions with water of zero hardness at 20° C. (68° F.) at concentrations of 2 per cent or less; such solutions, when kept in closed containers, shall remain either practically clear or become only slightly opalescent when allowed to stand for 24 hours at 20° C. (68° F.) away from direct light.

15. Group II disinfectants shall show no soap separation when cooled down to 0° C. and held at this temperature for 3 hours.

Certification and Labeling

16. The following form of statement on labels³, invoices, etc., is recommended:

"The Company certifies this disinfectant to conform to all requirements for (Group I)

(Group II) of the standard adopted by the NATIONAL ASSOCIATION OF INSECTICIDE AND DISINFECTANT MANUFACTURERS, INC., and recorded as Commercial Standard CS71-....., by the National Bureau of Standards of the U. S. Department of Commerce.

Phenol Coefficient....."

N.A.I.D.M. DEFENSE EMERGENCY SPECIFICATION "A" FOR PHENOLIC DISINFECTANT EMULSIFYING TYPE

Purpose

1. The purpose of this defense emergency specification is to provide a minimum specification for quality, as a basis for understanding and voluntary guarantees between producers, distributors, and users in the purchase of the commodities covered by these specifications, and as a foundation for confidence on the part of purchasers that the efficacy of the material is that which may be expected of phenolic disinfectant (emulsifying type), manufactured in conformity with a recognized specification of a national trade association.

Scope

2. This specification covers materials, physical and chemical properties, and certification of quality of phenolic disinfectant (emulsifying type).

Detail Requirements

3. The disinfectant shall not contain kerosene or any petroleum distillate other than phenols of petroleum origin.

4. The phenol coefficient shall be determined by the Food and Drug Administration method, using *B. typhosus* as test organism, and shall be clearly stated on the label attached to each shipping container.

5. The disinfectant shall make milky emulsions with water of zero hardness at 20° C. (68° F.) when diluted in the ratio of 5 parts of disinfectant to 95 parts of water for disinfectants having phenol

coefficients of 10 or under; and in the ratio of 2 parts of disinfectant to 98 parts parts of water for disinfectants having phenol coefficients of over 10. These emulsions shall show not more than a trace of oily float or sediment when stored for 5 hours at room temperature.

6. The disinfectant shall remain limpid, showing no sign of naphthalene crystallization down to 0° C. in 3 hours.

7. The disinfectant shall contain less than 5 per cent of benzophenol (phenol, C_6H_5OH).

8. The disinfectant, under normal and reasonable conditions of storage, shall remain stable and show no loss of germicidal value.

Certification and Labeling

9. The following form of statement on labels³, invoices, etc., is recommended:

The Company certifies this phenolic disinfectant (emulsifying type) to conform to all requirements of a specification adopted and recorded as N.A.I.D.M. Defense Emergency Disinfectant Specification "A" by the National Association of Insecticide and Disinfectant Manufacturers, Inc.

³ When used on labels, this statement is in addition to, and not in lieu of, the ingredient statement required by the Insecticide Act of 1910.

N.A.I.D.M. DEFENSE EMERGENCY SPECIFICATION "B" FOR PHENOLIC DISINFECTANT SOLUBLE TYPE

Purpose

1. The purpose of this defense emergency specification is to provide a minimum specification for quality, as a basis for understanding and voluntary guarantees between producers, distributors, and users in the purchase of the commodities covered by these specifications, and as a foundation for confidence on the part of purchasers that the efficacy of the material is that which may be expected of phenolic disinfectant (soluble type), manufactured in conformity with a recognized specification of a national trade association.

Scope

2. This specification covers materials, physical and chemical properties and certification of quality of phenolic disinfectant, soluble type.

General Requirements

3. The disinfectant shall be made from phenols of coal tar or petroleum origin and a dissolving agent.

4. The disinfectant shall not contain kerosene or any petroleum distillates other than phenols of petroleum origin.

5. The phenol coefficient shall be determined by the Food and Drug Administration method, using *B. typhosus* as test organism, and shall be clearly stated on the label attached to each shipping container.

6. The disinfectant shall make either a clear or opalescent mixture with dis-

PRIVATE FORMULA WORK

LET US

COSMETICS

OINTMENTS

POWDERS

ET CETERA

WITH YOUR MANUFACTURING PROBLEMS

R. GESELL, INCORPORATED

200 WEST HOUSTON ST., NEW YORK 14, N. Y.

tilled water at 20° C. (68° F.) within the concentration range of 1 to 4 per cent; when opalescent, it shall become practically clear upon addition of a few drops of a 10 per cent KOH solution.

7. It shall show no soap separation when cooled down to 0° C. and held at this temperature for 3 hours.

Certification and Labeling

8. The following form of statement on labels*, invoices, etc., is recommended:

The Company certifies this phenolic disinfectant (soluble type) to conform to all requirements of a specification adopted and recorded as N.A.I.D.M. Defense Emergency Disinfectant Specification "B" by the National Association of Insecticide and Disinfectant Manufacturers, Inc.

* When used on labels, this statement is in addition to, and not in lieu of, the ingredient statement required by the Insecticide Act of 1910.

N.A.I.D.M. SPECIFICATION "C" FOR PHENOLIC DISINFECTANT FROM SYNTHETIC PHENOLS

Purpose

1. The purpose of this commercial standard is to provide a minimum specification for quality, as a basis for understanding and voluntary guarantees between producers, distributors, and users in the purchase of the commodity covered by these specifications, and as a foundation for confidence on the part of purchasers that the efficacy of the material is that which may be expected of phenol disinfectant from synthetic phenols, manufactured in conformity with a recognized specification of a national trade association.

Scope

2. This specification covers materials, physical and chemical properties and certification of quality of phenolic disinfectants of synthetic origin.

Detail Requirements

3. The disinfectant shall be made from synthetic phenols of the type comprising alkyl, aryl, and aralkyl phenols, or their chlorinated or brominated derivatives, and a dissolving or emulsifying agent.

4. The phenol coefficient shall be determined by the Food and Drug Administration method, using *B. typhosus* as the test organism, and shall be clearly stated on the label attached to each shipping container.

5. The disinfectant, under normal and reasonable conditions of storage, shall remain stable and show no loss of germicidal value.

6. The disinfectant shall make stable emulsions or solutions with water of zero hardness at 20° C. (68° F.); they shall show not more than a trace of float or sediment when stored for 5 hours at room temperature.

Certification and Labeling

7. The following form of statement on labels*, invoices, etc., is recommended:

The Company certifies this phenolic disinfectant from synthetic phenols to conform to all requirements of a specification adopted and recorded as N.A.I.D.M. Specification "C" by the National Association of Insecticide and Disinfectant Manufacturers, Inc.

* When used on labels, this statement is in addition to, and not in lieu of, the ingredient statement required by the Insecticide Act of 1910.

N.A.I.D.M. SPECIFICATION "D" FOR FORTIFIED PHENOLIC DISINFECTANT

Purpose

1. The purpose of this commercial standard is to provide a minimum specification for quality, as a basis for understanding and voluntary guarantees between producers, distributors, and users in the purchase of the commodities covered by these specifications, and as a foundation for confidence on the part of purchasers that the efficacy of the material is that which may be expected of a fortified phenolic disinfectant manufactured in conformity with a recognized specification of a national trade association.

Scope

2. This standard covers materials, physical and chemical properties, and certification of quality of fortified phenolic disinfectant of both the emulsifying and soluble types.

Detail Requirements

3. The disinfectant shall be made from phenols of coal tar or petroleum origin, plus synthetic phenols of the class comprising alkyl, aryl or aralkyl phenols or their chlorinated or brominated derivatives, and a dissolving agent.

4. The proportion of the synthetic phenol shall be not more than 25 per cent by weight of the total phenolic content.

5. The disinfectant shall not contain kerosene or any petroleum distillates other than phenols of petroleum origin.

6. The phenol coefficient shall be determined by the Food and Drug Administration method, using *B. typhosus* as test organism, and shall be clearly stated on the label attached to each shipping container.

7. The disinfectant, under normal and reasonable conditions of storage, shall remain stable and show no loss of germicidal value.

8. The disinfectant shall make stable emulsions or solutions with water of zero hardness at 20° C. (68° F.); they shall show not more than a trace of float or sediment when stored for 5 hours at room temperature.

Certification and Labeling

9. The following form of statement on labels*, invoices, etc., is recommended:

The Company certifies this fortified phenolic disinfectant to conform to all requirements of a specification adopted and recorded as N.A.I.D.M. Disinfectant Specification "D," by the National Association of Insecticide and Disinfectant Manufacturers, Inc.

* When used on labels, this statement is in addition to, and not in lieu of, the ingredient statement required by the Insecticide Act of 1910.

SIMPLIFIED PRACTICE RECOMMENDATION FOR SIZES OF GLASS CONTAINERS AND PACKAGES FOR HOUSEHOLD INSECTICIDES

(Liquid Spray Type)

Table 1.—Retail Packages

Package Size	Exhibition No. in Limitation Order L-103	Overflow Capacity	Maximum Weight of Glass	Height	Maximum Outside Diam. of Body	G.C.A. 400 Finish Size	Packages per Shipping Case
	Fluid Ozs.	Fluid Ozs.	Avoir. Ozs.	Inches	Inches	M.M.	
1 pt.	80-50	16-31/32	11	6-41/64 overall	2-63/64	28	24
	{80-75	33-53/64	17½	8-1/8 overall	3-47/64	28½	
1 qt.	{80-76	33-59/64	17¾	8-1/8 overall	3-47/64	33½	12
	80-96	135¾	60	12-9/16 overall	5-63/64	38½	
1 gal. {bottle							
{jug	51.98	136	48	9-3/8 bottom to neck bead	6-41/64	38	4

NOTES:

1. Finishes are interchangeable in accordance with provisions of the order.
2. When lower glass weights are used, adjustment to make correct capacity shall be made in the "B" dimension.
3. Profiles similar to those illustrated for Exhibit Series 80-00 for Boston Round Bottles and Series 51-00 for Glass Jugs as shown in WPB Limitation Order L-103 shall be maintained consistent with "C" and "D" dimensions.
4. Containers shall be round.
5. Bottom stippling optional.

Compare!



CERTIFIED PRODUCTS

All Baird's Certified Products listed below
are available for private label

COAL-TAR EMULSIFIABLE DISINFECTANTS		
SYNTHETIC PHENOL GERMICIDE		
SYNTHETIC PINE DISINFECTANTS		
PINE OIL DISINFECTANTS	PINE TYPE DISINFECTANTS	
NEW ODORLESS NO-ROMA		
MINT-O-PHENE	CRESOL COMPOUNDS	
BLUE LABEL BAC-TROL	RED LABEL BAC-TROL	
PYRETHRUM TYPE PES-TOX	CATTLE-TOX	AQUADEE No. 25
SYNTHETIC TYPE PES-TOX	PYRETHRUM CONCENTRATE No. 6	
PES-TOX	VAPORIZING INSECTICIDE	B-M SPECIAL CLEANER
BAIRD'S FLOOR TREATMENT		
WET-SOL	WEED KILLERS	MOTOR WASH
ENGINE CLEANER	ENGINE DIP	CREOSOTE OIL
CLOSET CHEMICAL	RED MITE DESTROYER	
PRESERVOL	CRESYLIC ACID	TIC-TOX
HAND CLEANER	MOTH SPRAY	INSECT REPELLENT
FLAME RETARDANT	CRUDE CARBOLIC ACIDS	
ODORLESS CUTTING OIL DISINFECTANT		
SHINGLE STAIN OILS	COLLOIDAL DISINFECTANTS	
LARVAECIDES — FRESH AND SALT WATER		
ANIMAL DIPS	WOOD PRESERVING OILS	DEGREASERS



Baird & McGuire, Inc.

HOLBROOK, MASSACHUSETTS

Manufacturing Chemists

Serving the Industry for Over 38 Years





Peet-Grady Method

Official Method of the National Assn. Insecticide & Disinfectant Mfrs. for Evaluating Liquid Household Insecticides.

I. INTRODUCTION

THE Peet-Grady Method was adopted as an official test in 1932, and has since been improved in certain details, all improvements have been officially accepted after satisfactory trials. This method of test is a means of determining the relative efficiency of contact insecticides dissolved in fly spray base oils. As a biological test it is subject to variations which accompany the reaction of living organisms and should be employed under the supervision of a person familiar with the biological testing of insecticides. In order to measure with reasonable tolerance the relative position of different insecticides, the test is designed to be used in conjunction with the "Official Test Insecticide" as the basis of comparison.

Two methods, or procedures, are permitted. The Small Group method is substantially the same as outlined at the time the test was adopted in 1932 while the Large Group method was officially adopted in 1938. Both methods are being used extensively, and if correctly employed, evaluation by either test may be expected to be in reasonable agreement.

II. APPARATUS

A. Reference Insecticide

The reference insecticide shall be the current Official Test Insecticide (OTI) prepared by the National Association of Insecticide and Disinfectant Manufacturers, Inc. each year. The OTI must not be diluted or changed in any manner.

B. Atomizer

The Special Atomizer No. 5004, constructed by the DeVilbiss Company, Toledo, Ohio, for the N.A.I.D.M. Standardization Com-

mittee must be used. This atomizer shall be operated with air free of oil, dust particles, or condensed moisture, and maintained at a constant pressure of 12.5 ± 0.5 per sq. in. measured by a gage of not more than 30 pounds capacity or a manometer. The atomizer shall deliver 12 cc. of OTI in 24 seconds (tolerance ± 1 second) and this should be checked frequently. Atomizers failing to meet this test should be repaired by the manufacturer or replaced.

C. Test Insect

The test insect shall be the house fly (*Musca domestica*, L.) reared from a strain mixed under the supervision of the N.A.I.D.M. once each year. Healthy test groups having an average age of 4 days are to be used. Individual flies in the test groups shall be not less than 3 nor more than 6 days old at the time of testing. The strain shall be of such susceptibility that the OTI will cause a mortality of from 30 to 55 per cent.

D. Fly Cages

Cages of any convenient type may be used if they provide at least 1 cubic inch of space per fly and at least 2 sides and the top are screened. It is suggested that the base be square in shape to provide maximum floor space. The floor of the cage is preferably detachable, to facilitate cleaning and inserting a paper floor covering. The cages are constructed of wood or other suitable material and 16 mesh wire screening, and are fitted with a sleeve opening, rubber membrane, or a door.

E. Rearing Room

This room may be of any convenient size constructed so as to be free from strong drafts, and main-

tained at a temperature of 82 ± 2 degrees Fahrenheit and relative humidity of 50 ± 5 per cent. It should be separate from the testing room in order to eliminate the possibility of traces of insecticide coming in contact with the test insects. Ventilation should be provided to reduce odors and gases from fermenting media.

F. Testing Room

This room may be of any convenient size capable of holding the standard Peet-Grady Chamber and permitting adequate additional space for the operator to handle the test efficiently. While conducting tests, this room shall be maintained at a temperature of 75 to 85 degrees Fahrenheit. It is suggested that relative humidity be held between 40 and 70 per cent. Since the exhaust fan of the chamber will move relatively large quantities of air, the temperature of the air entering this room should be approximately that specified above.

G. Peet-Grady Test Chamber

The Test Chamber shall be rigidly constructed of wood, metal, or other suitable material. The inner surface shall be smooth, impervious to the usual household type of insecticide, and as free from cracks, projections, ledges, etc., as possible. The chamber shall be a 6-ft. cube by internal measurements, with a tolerance of plus or minus 1 in. for any dimension. One wall shall contain a tight-fitting door large enough for a man to enter conveniently, with the interior side flush with the wall when closed. One or more of the walls, or the ceiling, shall contain an observation window, preferably on two opposite walls. Illumination is provided by means of a glass window in the ceiling above which is

placed an electric light of such intensity as to permit flies to be observed easily. An opening covered with 10-mesh wire screen shall be connected to an exhaust fan duct and the size and the location of this opening in relation to ventilation openings in the wall must be such that thorough ventilation of the chamber is obtained. Preferably, the exhaust opening should be 1 sq. ft. or larger and located in or near the ceiling. Air inlet openings may be ports approximately 6 x 6 in. in size, covered with screen on the inside and provided with tight fitting hinged covers on the outside. Four ports located near the 4 lower corners, or 8 ports located near both the 4 upper and 4 lower corners are satisfactory, but the ventilation ports should not be on the same level as the exhaust port. The entrance door may be used alone or in conjunction with the ventilation ports if a screen door is provided and thorough ventilation of the chamber is obtained. If the temperature of the air used to ventilate the chamber is lower than 80° F., heaters may be used to obtain the temperature of 82 ± 2° F. required during the test period. Such heaters must be removed before a test is started. Openings shall be provided for the introduction of the insecticide; these must be so constructed and so located that uniform distribution of the spray is effected without undue ventilation of the chamber. These openings may be round 1 in. holes located not less than 6 in. or more than 12 in. from the ceiling and 18 in. from the nearest corner on each wall, or a single hole may be provided in the center of each wall 6 to 12 inches from ceiling.

H. Exhaust Fan

An exhaust fan moving not less than 1,000 cu. ft. of air through the chamber per min. shall be used to ventilate the chamber after each test. It shall be arranged with adequate piping to exhaust the chamber vapors outside of the building.

I. Insecticide Paper

Unsize, non-glazed absorbent paper, such as brown kraft or

gray bogus, shall be used to cover the chamber floor. Two overlapping sheets of 36-40 in. width or one sheet of 6 ft. width may be employed. No special weight is specified although 60-80 lb. gray bogus paper has been found excellent.

J. Apparatus for Picking Up Flies

Any convenient means of picking up the paralyzed flies without injuring or appreciably disturbing them may be used. If a vacuum device is used, it must produce gentle suction, have a sufficiently large receptacle to prevent crowding of the flies, and it shall be cleaned after each test with the same materials used in cleaning the chamber.

III. PROCEDURE

A. Rearing and Handling Flies

In this procedure, eggs are transferred to media suitable for the development of larvae, the pupae are collected from the media and placed inside of cages, and the adult flies emerge and remain in these cages until the day of testing.

Larval media: The preferred containers are cylindrical glass battery jars approximately 6 in. in diameter and 9 in. high. For one jar, mix 340 gm. (12 oz.) standard dry larval media, (1) with approximately 750 cc. of an aqueous suspension containing 15 gm. moist cake yeast and 10 cc. non-diastatic Diarmalt, (2). Mix thoroughly until a loose, fluffy media is obtained, transfer it to the battery jar without packing, cover with cloth and set in the insectary. The amount of suspension required for best rearing results will need be determined in each laboratory and it may be varied in order to prevent mold growth. It is suggested the media be prepared in the late afternoon of the day before egg collection.

- (1) Mixed quarterly according to NAIDM specifications by the Ralston Purina Co., St. Louis, Mo., on the basis of orders received by the first of January, April, July and October, in 50 lb. bags. Terms—pay on receipt of invoice.

- (2) Standard Brands Inc. products. These can be obtained from local distributors in most cases.

Eggs: Eggs are collected for a period not longer than 16 hours from food dishes or other oviposition media in cages containing mature flies not more than 8 days old. It is suggested that fresh oviposition media be placed in fly cages in the late afternoon and eggs be collected early on the following morning. After collecting the eggs they must be measured and seeded without delay. Wash the eggs in tap water at room temperature and measure 2000 eggs as accurately as possible. This may be done by allowing the eggs to settle in a calibrated pipette or graduate (0.1 cc. settled eggs contains about 700) or the eggs can be filtered and measured in calibrated pits or cells. Use 10 cc. tap water to measure and to scatter the eggs in a ½ in. pit located in the center of the jar of larval media. Cover the eggs with loose media, replace the cloth covers on the jars, and set jars in the insectary so that at least 1.5 in. separates each jar to permit free air circulation. The maximum temperature in the jar (about 3 days later) must not exceed 130° F. Under normal conditions, more than 85 per cent of the eggs should hatch within 36 hours of the time they are laid.

Pupae: Mature larvae migrate to the top portion of the media and normally all larvae will have pupated by the seventh day after seeding eggs. When this occurs, the portion of media containing pupae is loosened, poured into a shallow tray, and air dried at room temperature. An electric fan may be used to hasten drying. Pupae are separated from the dry media by sprinkling the pupae-media mixture on an inclined tray or chute set in front of an air blast such as that from an electric fan. The pupae must be handled gently and as little as possible in order to avoid injury. Under normal conditions, at least 95 per cent of flies will emerge from the pupae.

The separated pupae are thoroughly mixed and weighed in

groups as test units and each group is placed in a shallow dish which is, in turn, placed in a cage which provides at least 1 cu. in. of space per pupae. If the large group procedure is used the test unit consists of approximately 500 pupae. If the small group procedure is used, more than 500 pupae are placed in stock cages and adult flies are sampled prior to testing.

Adult Flies: Each cage is supplied daily with a dish containing at least 15 cc. of a 50 per cent dilution of milk with water for each 100 flies and so prepared as to prevent the flies from drowning. A 40 per cent formalin solution at the rate of 1/1500 delays souring of milk for several hours. Satisfactory food must be available to the flies at all times. The series of test units is kept until the second day of oviposition (usually the 14th day after the culture was prepared) when they are ready for testing. Under normal rearing conditions, at least 80 adult flies should be obtained from each 100 eggs seeded.

B. Testing Flies

Before a fly spray test is started, the Peet-Grady chamber must be clean and have clean paper on the floor, all ports and openings must be closed, the temperature must be $82 \pm 2^\circ \text{F.}$, and all windows must be equally shaded. In both procedures, only flies which are capable of flying may be liberated into the Peet-Grady chamber. In the large group procedure all flies in one cage are used in a single test, but in the small group method a sample of 100 ± 5 flies is used in each test. Samples may be taken by liberating the flies directly into the chamber and continuing until about 10 per cent of flies remain in the stock cage. These are discarded. Samples may be taken also by discarding the first 100 flies and then counting 50 flies into each of a series of small cages. One hundred flies are counted into the last cage and then, starting with the next to last cage and working backwards, 50 flies are added to each. Flies remaining in the stock

cage are discarded. The order of spray treatments must be randomized as discussed in section IV, paragraph 6.

After liberating the flies in the chamber, a total of 12 cc. of insecticide shall be applied within one minute, at 12.5 lb. pressure, and in equal quantities through each spray hole. The nozzle of the atomizer shall be oscillated slowly in a horizontal plane to avoid spraying walls and ceilings and to effect uniform distribution of the spray. The chamber is kept closed at a constant temperature in the range of $82 \pm 2^\circ \text{F.}$ for 10 min. from the time the spraying is started. At the end of 10 min. the ports are opened and the chamber is ventilated by means of the exhaust fan while the flies are collected.

The paralyzed flies are picked up and transferred immediately to clean cages meeting the specifications of section II, paragraph D. These flies may be counted when they are picked up or later, depending upon which time is most convenient. During the subsequent 24-hr. recovery period, the cage is placed in the rearing room and supplied with an adequate quantity of a 5 per cent sugar solution, arranged so that the top of the dish is not more than $\frac{3}{4}$ inch above the floor of the cage and flies cannot drown in it. A gauze-wrapped ball of cotton saturated with 5 per cent sugar solution is also satisfactory.

The unparalyzed flies in the chamber at the end of the 10-min. exposure period must be counted and discarded.

After a test is completed, all toxic residues must be removed from the chamber. The paper on the floor must be renewed and the inside walls and ceiling must be cleaned thoroughly. Wiping with a clean cloth saturated with alcohol containing 10 per cent acetone or washing with soap and water will remove a number of toxic residues. However, special cleaning precautions may be required after a test with a new chemical compound in order to remove its toxic residue.

C. Assembling the Data

The number of unparalyzed flies must be counted and recorded at the end of the 10-min. exposure period. The dead flies are counted 24 hrs. (± 1 hr.) later, preferably by removing them from the recovery cage. Only flies that show no sign of life upon being touched may be counted as dead. If paralyzed flies were counted as they were collected, the sum of paralyzed and unparalyzed flies yields the total flies in the test. If paralyzed flies were not counted as collected, the recovered flies are killed by placing the cage in an oven at 170°F. for a few minutes, after which they are counted. The sum of recovered and dead flies yields the paralyzed flies and this sum added to the unparalyzed flies yields the total flies used in the test. The mortality is the per cent dead of total flies and the knockdown is the per cent paralyzed of total flies.

IV. CONDITIONS FOR OFFICIAL EVALUATION

1. The tests shall be conducted in accordance with the procedure previously described.
2. At least 2 cultures of flies shall be used in making an official evaluation.
3. Cages showing a combined mortality and crippling greater than 8 per cent on the day of test shall not be used.
4. An unknown insecticide to be officially rated shall have a knockdown percentage equal to that of the OTI with a tolerance of minus 2.
5. The kill by the OTI shall fall between 30 and 55 per cent in all tests. The toxicity of an unknown spray shall be reported by a grade letter, obtained by subtracting the average kill by the OTI from the average kill by the unknown spray and comparing this result with the following figures:

Grade Letter	Kill Difference
AA	: +16 or greater
A	: +6 to +15
B	: +5 to -5

6. In the small group procedure no more than 2 unknown

samples may be tested in conjunction with one OTI in any one series. Ten tests are run on the OTI and on each of the unknowns in parallel; that is, test each spray the same number of times on flies of the same culture and test all sprays the same number of times on any one day. The samples of a series must be randomized in the order of testing. For example, number the samples and the OTI, and test them in the order 1, 2, 3; 2, 1, 3; 3, 2, 1, etc., until each has

been tested ten times. After the mortality data are obtained, calculate the average kills and determine the difference between that of the unknowns and that of the OTI. In order for these differences to be valid, the standard error of the mean difference between the average OTI kill and the average unknown kill must be less than 3. If it is 3 or greater, the test results were too variable and to make the results valid, additional paired tests must be

run to reduce the figure to a value less than 3. The following example illustrates the arrangement of test data and calculations described in the preceding paragraphs. When two unknown samples and the OTI are tested in series, the first table should consist of differences between Sample No. 1 and the OTI, the second table should show differences between Sample 2 and the O.T.I.

6. Small Group Method

Pair	Culture	Date	% Dead		Difference ^a	Deviation ^b Squared	
			Sample 1	OTI			
1	C	3-8	58	50	+8	+4	16
2	C	8	62	55	+7	+3	9
3	C	8	60	54	+6	+2	4
4	C	8	52	52	+0	-4	16
5	C	8	49	46	+3	-1	1
6	E	9	61	54	+7	+3	9
7	E	9	46	49	-3	-7	49
8	E	9	53	51	+2	-2	4
9	E	9	57	54	+3	-1	1
10	E	9	53	46	+7	+3	9
			55. 1M	51. 1M	+4 MD	0	118 Sum d ^b

^a Sample 1 kill minus OTI kill.

^b Deviation from the mean difference (MD).

The mean difference (MD) between Sample 1 kill and the OTI kill is 4.0

$$\text{The standard error of MD} = \sqrt{\frac{\text{Sum } d^b}{n-1}} = \sqrt{\frac{118}{9}} = 1.14$$

1.14 is less than 3, thus indicating the test has been properly conducted. The letter n (in formula above) denotes the number of paired tests. This number is always 10 except when it is necessary to run additional tests to reduce the standard error of the mean difference to 3 or less.

The percentage kill of Sample 1 minus the percentage kill of OTI is +4, therefore, Sample 1 is a "B" grade insecticide.

7. Large Group Method

Cage No.	CULTURE E Nov. 21		CULTURE F Nov. 23	
	Sample	% Dead	Sample	% Dead
1	OTI	43	2	69
2	1	44	3	65
3	3	57	OTI	54
4	2	63	3	58
5	3	52	1	45
6	OTI	47	2	77
7	1	39	1	54
8	2	71	OTI	46

Sample	Mortalities				Average	Rating	Grade
OTI	43,	47,	54,	46	47.5		
1	44,	39,	45,	54	45.5	- 2.0	B
2	63,	71,	69,	77	70.0	+22.5	AA
3	57,	52,	65,	58	58.0	+10.5	A

7. In the Large Group procedure the evaluation is carried out as follows:

The evaluation is based on the difference in mortality of the OTI and the unknown as determined by a minimum of 4 tests. The order of testing shall be random and replicated OTI tests on any culture shall agree within 10 points. The accompanying example illustrates one arrangement of testing, the computation of the test results, and the grading of the sprays.

Federal Specifications

General and detailed requirements as specified in the Standard Stock Catalogue of the U.S. Federal Specifications Board.

Powered High-Titer Built Soap (Proposed as Federal Specification P-S-536)

The soap covered by this specification shall be of one type as hereinafter specified: *Composition*.—The composition of the soap shall be as shown in Table I. *Form*.—The soap shall be a homogeneous, uniform mixture of soap and alkalies in powdered form. It shall be readily soluble. *Color*.—The soap shall have a light uniform color. *Odor*.—The odor shall not be objectionable in the soap as received, or in a hot water solution. The soap shall not leave an objectionable odor on the objects after using with a water solution of the soap and rinsing thoroughly with hot water. If desired, the odor of the material under the above conditions shall conform to the odor of the sample approved by the bureau concerned. The approved sample shall be kept in an airtight container for comparison with the sample submitted for inspection.

Chip Soap (P-S-566a)

Chip soap shall be a soap in chip form made from soda and fats or fatty acids, without rosin, as free as possible from water and all substances other than true soap, of a light uniform color, free from disagreeable odor, and suitable for

Table I. — Composition

	Maximum	Minimum
	Per Cent	
Moisture and matter volatile at 105°C.....	11	
Free alkali, calculated as sodium hydroxide, NaOH.....	0.2	22 per cent
Alkaline salts, calculated as sodium carbonate, Na ₂ CO ₃	1.0	
Matter insoluble in water.....	0.5	
Chloride (calculated as sodium chloride).....		56 per cent
Anhydrous soap.....		39°C.
Titer of the mixed fatty acid prepared from the soap.....	1.5	
Residue retained on a No. 12 sieve.....	18.0	
Passing through a No. 140 sieve.....	None	
Rosin.....	1.0	
Unsaponifiable matter.....	None	
Starch.....		

laundering and other washing, cleaning and scouring processes with soft water, when the presence of alkaline salts is not desirable.

Moisture and matter volatile at 105° C. shall not exceed 10 per

cent. The sum of free alkali, total matter insoluble in alcohol, and sodium chloride shall not exceed 4 per cent. Free alkali, calculated as sodium hydroxide (NaOH), shall not exceed 0.2 per cent. Matter in-

ONLY the essential requirements of these government specifications have been extracted in our summary. Copies of the complete specifications, including details as to packaging, methods of analysis, etc., are available through the U. S. Federal Specifications Board. The specifications listed are the latest versions as of the date of compilation of this edition of the Blue Book. Readers are cautioned, however, that further changes are being made periodically, and that the latest amended versions of all specifications should be consulted in filling government orders.

soluble in water shall not exceed 1.0 per cent. Anhydrous soap shall be not less than 85 per cent. Titer of the mixed fatty acids prepared from the soap must be not less than 39° C. No rosin shall be present.

Cake Grit Soap (P-S-571a)

Cake grit soap shall be of the following types as specified: Type A—for fine work, such as glass and enamel; Type B—for scouring and scrubbing.

Type A—

Moisture and matter volatile at 105° ±2° C. shall not exceed 4 per cent. Alkali as alkaline salts (total alkalinity of matter insoluble in alcohol), calculated as sodium carbonate (Na_2CO_3), shall not exceed 1 per cent. Free alkali, calculated as sodium hydroxide (NaOH), shall not exceed 0.1 per cent. Insoluble siliceous material shall be not less than 88 per cent nor more than 93 per cent. The insoluble siliceous material shall consist of not less than 90 per cent of ground feldspar. All of the insoluble siliceous material shall pass through a No. 100 sieve, and the residue retained on a No. 200 sieve shall not exceed 5 per cent. Sugar, and foreign matter shall not be present. Anhydrous soda soap shall be within 1 per cent of the difference between 100 and the sum of the matter volatile at 105° ±2° C., insoluble siliceous material, and alkali as alkaline salts. The cakes shall be well compressed and of a satisfactory degree of friability, which shall not be materially affected or lessened after immersion in or contact with water. The material shall not scratch glass or enameled surfaces. The material shall be unscented and shall be of a light gray or white color.

Type B—

Moisture and matter volatile at 105° ±2° C. shall not exceed 5 per cent. Alkali as alkaline salts (total alkalinity of matter insoluble in alcohol), calculated as sodium carbonate (Na_2CO_3), shall not exceed 3 per cent. Free alkali, calculated as sodium hydroxide (NaOH),

Detail Requirements for Laundry Chip Soap

	Maximum Per Cent	Minimum Per Cent
Moisture and matter volatile at 105° C.....	15.0	....
Sum of free alkali or free acid, total matter insoluble in alcohol, and sodium chloride.....	12.0	....
Free alkali, calculated as sodium hydroxide (NaOH).....	.5	....
Free acid, calculated as oleic acid.....	.5	....
Matter insoluble in water.....	1.0	....
Chloride, calculated as sodium chloride (NaCl).....	1.0	....
Rosin	20.0	....
Anhydrous soap .....	....	72.0

shall not exceed 0.1 per cent. Insoluble siliceous material shall not be less than 75 nor more than 85 per cent. The insoluble siliceous material shall be mainly quartz, and it all must pass through a No. 100 sieve. Sugar, and foreign matter shall not be present. Anhydrous soda soap shall be within 1 per cent of the difference between 100 and the sum of the matter volatile at 105° ±2° C., insoluble siliceous material, and alkali as alkaline salts. The cakes shall be well compressed and of a satisfactory degree of friability, which shall not be materially affected or lessened after immersion in or contact with water. The material shall be unscented and shall be of a light gray or white color.

Hand Grit Soap (P-S-576a)

Hand-grit soap shall be a cake soap containing clean, finely divided insoluble siliceous matter, as free as possible from water, uncolored, mildly perfumed unless otherwise specified, and well compressed in firm, smooth cakes.

Matter volatile at 105° C. shall not exceed 25 per cent. Total alkalinity of matter insoluble in alco-

hol (alkaline salts), calculated as sodium carbonate (Na_2CO_3), shall not exceed 1 per cent. Free alkali, calculated as sodium hydroxide (NaOH), shall not exceed 0.1 per cent. Insoluble siliceous material shall be not less than 25 nor more than 35 per cent. The insoluble siliceous material shall not yield more than 2 per cent of residue retained on a No. 100 sieve and not more than 10 per cent of residue retained on a No. 200 sieve. Sugar, and foreign matter shall not be present. Rosin shall not exceed 5 per cent. Anhydrous soap shall be not less than 35 per cent. The percentage of moisture and volatile matter will be computed on the basis of the soap as received, but all other constituents will be calculated to the basis of material containing 25 per cent of matter volatile at 105° C. Unless otherwise specified, each cake shall weigh not less than 8 ounces nor more than 16 ounces.

Laundry Chip Soap (Rosin Type) (P-S-581)

Laundry chip soap shall be a well-made, uniformly mixed soap in chip form, made from soda and fats or fatty acids, with no excessive

Detail Requirements for Granulated Laundry Soap

	Maximum Per Cent	Minimum Per Cent
Moisture and matter volatile at 105° C.....	10.0	....
Sum of free alkali or free acid, total matter insoluble in alcohol, and sodium chloride.....	14.0	....
Free alkali, calculated as sodium hydroxide (NaOH).....	.5	....
Free acid, calculated as oleic acid.....	.5	....
Matter insoluble in water.....	1.0	....
Chloride, calculated as sodium chloride (NaCl).....	1.0	....
Rosin	20.0	....
Anhydrous soap .....	....	75.0
Residue retained on a No. 12 sieve.....	2.0	....

proportion of rosin and a moderate amount of matter insoluble in alcohol, shall be of a uniform color, and shall be suitable for use with moderately hard water for general cleaning and laundry purposes. The odor shall not be objectionable in the soap as received or in a hot solution of the soap in water. The material shall not leave an objectionable odor on dishes or other objects after washing with a water solution of the soap and rinsing thoroughly with hot water. If desired, the odor of the material under the above conditions shall conform to the odor of a sample mutually agreed upon by buyer and seller.

The material shall conform to the detail requirements listed in the table on facing page.

Granulated Laundry Soap (Rosin Type) (P-S-583)

Laundry granulated soap shall be a well-made, uniformly mixed soap in granulated or powdered form, made from soda and fats or fatty acids, with no excessive proportion of rosin and a moderate amount of matter insoluble in alcohol, shall be of a uniform color, and shall be suitable for use with moderately hard water for general cleaning and laundry purposes. The odor shall not be objectionable in the soap as received or in a hot solution of the soap in water. The material shall not leave an objectionable odor on dishes or other objects after washing with a water solution of the soap and rinsing thoroughly with hot water. If desired, the odor of the material under the above conditions shall conform to the odor of a sample mutually agreed upon by buyer and seller. Detail requirements listed in table on facing page.

Ordinary Bar Laundry Soap (P-S-591a)

Ordinary laundry bar soap shall be a well-made, uniformly mixed laundry or common soap, made from soda and fats or fatty acids, with no excessive proportion of rosin and a moderate amount of matter insoluble in alcohol, and shall be suitable for use with moderately

hard water for general cleaning and laundry purposes.

Odor shall not be objectionable in the soap as received or in a hot solution of the soap in water. The materials shall not leave an objectionable odor on dishes or other objects after washing with a water solution of the soap and rinsing thoroughly with hot water. If desired, the odor of the material under the above conditions shall conform to the odor of a sample mutually agreed upon by buyer and seller. The mutually agreed upon sample shall be kept in an air-tight, closed container for comparison with samples from deliveries.

Moisture and matter volatile at 105° C. shall not exceed 36 per cent. The sum of free alkali or free acid, total matter insoluble in alcohol and sodium chloride, shall be not less than 2 per cent nor more than 11.0 per cent. Free alkali, calculated as sodium hydroxide (NaOH), shall not exceed 0.5 per cent. Free acid, calculated as oleic acid, shall not exceed 0.5 per cent. Matter insoluble in water shall not exceed 1 per cent. Chloride calculated as sodium chloride (NaCl), shall not exceed 1.0 per cent. Rosin shall not exceed 25 per cent. Anhydrous soap shall be not less than 52 per cent. The percentage of moisture and volatile matter will be computed on the basis of the soap as received, but all other constituents will be calculated on the basis of an assumed moisture and volatile matter content of 36 per cent.

Powdered Laundry Soap (P-S-596a)

Powdered soap shall be a soap in powdered form made from soda and fats or fatty acids, without rosin, as free as possible from water and all substances other than true soap, of a light uniform color, free from disagreeable odor, and suitable for laundering and other washing, cleaning and scouring processes with soft water, when the presence of alkaline salts is not desirable.

Moisture and matter volatile

at 105° C. shall not exceed 6 per cent. The sum of free alkali, total matter insoluble in alcohol, and sodium chloride shall not exceed 4 per cent. Free alkali, calculated as sodium hydroxide (NaOH), shall not exceed 0.2 per cent. Matter insoluble in water shall not exceed 1.0 per cent. Anhydrous soap shall be not less than 89 per cent. Titer of the mixed fatty acids prepared from the soap shall be not less than 39° C. Residue retained on a No. 12 sieve shall not exceed 1.5 per cent. Rosin, none. The percentage of moisture and volatile matter will be computed on the basis of the soap as received, but all other constituents will be calculated on the basis of material containing 6 per cent of volatile matter.

Liquid and Paste Soap for Automobile, Floor and General Cleaning (P-S-598)

Soap covered by this specification shall be of two types. Type I—Liquid. Type II—Paste. Type I shall be a uniform liquid soap made solely from whole neutral vegetable oils and potash. Type II shall be a uniform gel or paste soap made solely from whole neutral vegetable oils and potash.

Type I shall be soluble in soft water and when diluted with water shall act as a cleaner. The flash point shall be above its boiling point. It shall not contain any solvents or oils that will damage floor surfaces. The odor shall not be objectionable in the soap as received or in a hot solution of the soap in water. The material shall not leave an objectionable odor on surfaces after washing with a water solution of the soap and rinsing thoroughly with plain water.

Type II. Paste soap.—The material shall be a uniform translucent, firm gel or paste of a yellowish-white to brownish-yellow color. The odor shall not be objectionable in the soap as received or in a hot solution of the soap in water. The material shall not leave an objectionable odor on surfaces after washing

ANTI-FOGGING AGENTS • ANTI-RANCIDITY AGENTS • AUTO WASHES • BOTTLE-
 WASHES • BATH SALTS • BUBBLE BATH MIXTURES • CATTLE DIPS • COLOR DISPERSANT •
 CORROSION INHIBITORS • DAIRY CLEANERS • DEGREASERS • DISHWASHING COMPOUNDS • DISPERS
 AGENTS • DOG REPELLENTS • DRAIN PIPE CLEANERS • DRY CLEANERS SOAPS • EMULSIFIERS • FISH C
 OAPS • FLOATING SOAPS • FLOOR CLEANERS • FLOOR WAXES • FOAMING AGENTS • FRUIT PEEL
 FRUIT WASHES • GLASS-
 INSECTICIDE SPREADERS •
 LAUNDRY DETERGENTS •
 LABEL REMOVERS •
 LEATHER CLEANERS
 LAUNDRY SOAPS •
 REPELLENTS • LAUNDRY-
 MECHANICS SOAPS •
 CLEANERS • MEDICINAL-
 PAINT CLEANERS • RUG
 PAINT REMOVERS •
 SALT WATER SOAPS •
 SCOURING POWDERS
 SCALE REMOVERS •
 SPOTTING AGENTS
 SWEEPING
 SHAMPOOS •
 TEXTILE SOAPS •
 WETTING AGENTS •

POLISHES • HAT CLEANERS • HARD WATER SO
 INSECTICIDE CARRIERS • LARVACI
 INSECT REPELLE
 LIQUID SO

*Improve Your Products—
 with*
NACCONOL NR

*America's Leading Synthetic Detergent
 CLEANS • WETS • FOAMS • EMULSIFIES • DISPERSES
 Leader in Production • Leader in Performance*

PRODUCTION—Planned Years Ahead

Ample Capacity now and into the future
 assures NACCONOL NR users a dependably
 ample supply.

PRICE—Reflects Volume Production

Manufacturing efficiencies of mass produc-
 tion always passed along to NACCONOL
 NR users. NACCONOL NR still costs $\frac{2}{3}$ less
 than in 1932!

*Trade Mark Reg.

SHAMPO
 ROSIN SO
 SOFT SO
 SOAP POWD
 SPOT REMOV
 SHAVING CREA
 COMPOUND
 WATER SOFTEN
 • WEED KILL
 WOOL SCOUR

Inquiries Invited

National Aniline

DIVISION • ALLIED CHEMICAL & DYE CORPORATION

40 RECTOR ST., NEW YORK 6, N. Y. • BOSTON • PROVIDENCE • PHILADELPHIA • CHICAGO • SAN FRANCISCO • PORTLAND, ORE.
 GREENSBORO • CHARLOTTE • ATLANTA • NEW ORLEANS • CHATTANOOGA • TORONTO



with a water solution of the soap and rinsing thoroughly with plain water. *Moisture (by distillation method, using toluol instead of xylol)*—shall not exceed 55 per cent. Deliveries which yield more than 55 per cent of moisture shall be rejected without further test. The soap shall dissolve readily to give a 0.15- to 0.2 per cent solution, using distilled water at 15.5 to 20° C. (60° to 68° F.). The solution so prepared shall yield a good suds. A solution of the soap in soft water shall act as a cleaner and shall not damage surfaces on which it is used. When specified, each bidder shall submit with his proposal a 1-quart sample of the soap that he proposes to furnish, packed in a screw-top glass jar, to show odor, color, and consistency. The sample so furnished shall be kept for comparison with samples from deliveries. The material of each type shall not become rancid or otherwise deteriorate when kept in a closed container.

The material shall conform to the detail requirements for the type indicated as listed in the accompanying table. Percentages are by weight.

Computation (type II only).

—The percentage of moisture shall be computed and reported by the testing laboratory on the soap as received. The percentages of all other constituents shall be calculated and reported on an assumed moisture content of 50 per cent.

Soap; Low-Titer (P-S-600a)

Low-titer soap shall be of the following types and classes:

- Type I—Bar form
- Type II—Other forms
 - Class A—Granular
 - Class B—Powdered
 - Class C—Flake

The soap shall have a uniform color. The odor shall not be objectionable in the soap as received or in a solution of the soap in water at 125° to 130° F. The material shall not leave an objectionable odor on objects after washing with a water solution of the soap and rinsing thoroughly with hot water. If

Detail Requirements (P-S-598)

	Type I		Type II	
	Min.	Max.	Min.	Max.
Moisture (toluol distillation method) (per cent)....	..	..	..	55
Total matter insoluble in alcohol (per cent).....	..	0.5	..	1.0
Free alkali, calculated as potassium hydroxide (KOH) (per cent) .....	..	.05	..	.1
Free acid, calculated as oleic acid (per cent).....	..	.1	..	.2
Alkaline salts, calculated as potassium carbonate (K ₂ CO ₃) (per cent) .....	..	.1	..	.2
Matter insoluble in distilled water (per cent) .....	..	.1	..	.2
Chloride, calculated as potassium chloride (KCL) (per cent) .....	..	.3	..	.5
Unsaponified and unsaponifiable matter (per cent)....	..	.4	..	.8
Anhydrous soap, calculated as potash soap (per cent)...	20	..	43	..
Total sodium compounds, calculated as Na ₂ O (per cent) .....	..	.2	..	.5
Glycerol (per cent)	1.8	..	4	..
Iodine number (WIJS) of mixed fatty acids derived from the soap	100	150	100	150
Acid number of mixed fatty acids derived from the soap	195	205	195	205
Rosin .....	..	None	..	None
Sugar .....	..	None	..	None

desired, the odor of the material under the above conditions shall conform to the odor of a sample mutually agreed upon by buyer and seller. When specified, each bidder shall submit with his proposal a sample of the material that he proposes to furnish, to show color, odor, and condition.

Low-titer soap shall conform to detail requirements as listed in the table below.

Potash Linseed Oil Soap, Liquid and Paste, for Floor and General Cleaning (P-S-603)

Potash-linseed-oil soap shall be of two types. Type I—Liquid. Type II—Paste. Type I shall be a uniform liquid soap made solely from whole neutral raw linseed oil and potash. Type II shall be a uniform, translucent, firm gel or paste soap made solely from whole neutral raw linseed oil and potash.

Type I shall be soluble in soft water and when diluted with water shall act as a cleaner. The flash point shall be above its boiling point. It shall not contain any solvents or oils that will damage floor surfaces. The odor shall not be objectionable

Detail Requirements for Low Titer Soap

	Type I		Type II	
	Max.	Min.	Max.	Min.
Matter volatile at 105° ± 2° C. (per cent).....	35.0	..	7.0	..
Sum of free alkali or free acid, total matter insoluble in alcohol, and sodium chloride (per cent).....	2.0	..	9.0	..
Water soluble sodium silicate (calculated as in Spec P-S-536a) (per cent)	0.4	..	..	..
Free alkali, calculated as sodium hydroxide (NaOH) (per cent)	0.1	..	0.4	..
Free acid, calculated as oleic acid (per cent).....	0.1	..	None	..
Matter insoluble in water (per cent).....	.5	..	1.5	..
Rosin	None	..	None	..
Sugar	None	..	None	..
Copper (parts per million).....	10.0	..	..	..
Unsaponified saponifiable matter (per cent).....	1.0	..	1.0	..
Anhydrous soap (per cent).....	..	64.0	..	81.0
Titer of the mixed fatty acids prepared from the soap	28° C	..	22° C	..
Iodine number (Wijs) of the mixed fatty acids prepared from the soap.....	90.0	74.0	90.0	74.0
Acid number of the mixed fatty acids prepared from the soap	205.0	180.0	205.0	180.0
Residue retained on a No. 12 sieve (class B only) (per cent) .....	..	..	1.5	..

in the soap as received or in a hot solution of the soap in water. The material shall not leave an objectionable odor on surfaces after washing with a water solution of the soap and rinsing thoroughly with plain water.

Type II—Paste soap shall be a uniform translucent firm gel or paste soap of a yellowish-white to greenish-brown color. The odor shall not be objectionable in the soap as received or in a hot solution of the soap in water. The material shall not leave an objectionable odor on surfaces after washing with a water solution of the soap and rinsing thoroughly with plain water. *Moisture (by distillation method, using toluol instead of Xylol)* shall not exceed 55 per cent. Deliveries which yield more than 55 per cent of moisture shall be rejected without further test. The soap shall dissolve readily to give a 0.15- to 0.2-per cent solution, using distilled water at 15.5° to 20° C. (60° to 68° F.). The solution so prepared shall yield a good suds. A solution of the soap in soft water shall act as a cleaner and shall not damage floor surfaces. When specified, each bidder shall submit with his proposal a 1-quart sample of the soap that he proposes to furnish, packed in a screw-top glass jar, to show odor, color, and consistency. The sample so furnished shall be kept for comparison with samples from deliveries. The material of each type shall not become rancid or otherwise deteriorate when kept in a closed container.

The material shall conform to the detail requirements for the type indicated as listed in the accompanying table. Percentages are by weight.

Computation (type II only).

—The percentage of moisture shall be computed and reported by the testing laboratory on the soap as received. The percentages of all other constituents shall be calculated and reported on an assumed moisture content of 50 per cent.

Soap Powder (P-S-606a)

Soap powder shall be a uniform mixture of soap and sodium

Detail Requirements for Potash Linseed Soap

	Type I		Type II	
	Min.	Max.	Min.	Max.
Moisture (toluol distillation method) (per cent).....	..	..	..	55
Total matter insoluble in alcohol (per cent) .....	..	0.5	..	1.0
Free alkali, calculated as potassium hydrate (KOH) (per cent) .....	..	..	..	..
Free acid, calculated as oleic acid (per cent) .....	..	..	..	..
Alkaline salts, calculated as potassium carbonate (K ₂ CO ₃) (per cent) .....	..	..	..	..
Matter insoluble in distilled water (per cent) .....	..	..	..	..
Chloride, calculated as potassium chloride (KCL) (per cent) .....	..	..	..	..
Unsaponified and unsaponifiable matter (per cent).....	..	..	..	..
Anhydrous soap, calculated as potash soap (per cent)...	20	..	43	..
Total sodium compounds, calculated as Na ₂ O (per cent) .....	..	..	..	..
Glycerol (per cent)	1.8	..	4	..
Iodine number (WISJ) of mixed fatty acids derived from the soap	175	..	175	..
Acid number of mixed fatty acids derived from the soap	190	205	190	205
Sugar .....	..	None	..	None

carbonate, and/or other alkaline salts in powdered form. It shall be readily soluble in tepid water, shall contain no free caustic alkali or inert fillers, and shall be free from objectionable odor.

Anhydrous soap shall be not less than 15 per cent. Alkaline salts, calculated as sodium carbonate (Na₂CO₃) shall be not less than 30 per cent. The sum of anhydrous soap and alkaline salts, calculated as sodium carbonate shall be not less than 55 per cent.

Salt Water Soap (P-S-611a)

Salt-water soap shall be a soap well made from pure coconut oil fatty acids, pure palm kernel oil fatty acids, or a mixture thereof, and soda. It shall be entirely soluble in both sea water and fresh water and shall make a suitable lather. The soap shall be light in color and free from objectionable odor. The material shall conform to the

detail requirements listed in the table below.

The percentage of moisture and volatile matter shall be computed, and reported by the testing laboratory, on the soap as received. The percentages of all other constituents shall be calculated and reported on an assumed moisture and volatile matter content of 55%.

White Floating Toilet Soap (P-S-616a)

Floating toilet soap shall be a cake soap without objectionable odor, thoroughly saponified, and so prepared as to float on water.

Moisture and matter volatile at 105° C. shall not exceed 34 per cent. The sum of free alkali, total matter insoluble in alcohol, and sodium chloride shall not exceed 2.0 per cent. Free alkali, calculated as sodium hydroxide (NaOH), shall not exceed 0.1 per cent. Chloride,

Detail Requirements for Salt Water Soap

	Maximum Minimum	
Moisture and matter volatile at 105°C.....per cent	55.0	..
Total matter insoluble in alcohol.....per cent	3.0	2.0
Free alkali, calculated as sodium hydroxide (NaOH).....per cent	.5	..
Chloride, calculated as sodium chloride (NaCl).....per cent	3.0	2.5
Anhydrous soap .....	..	40.0
Matter insoluble in water.....per cent	.5	..
Acid number of the mixed fatty acids prepared from the soap.....	..	240
Sugar, and foreign matter.....	None	..
Rosin	None	..

calculated as sodium chloride (NaCl), shall not exceed 1 per cent. Matter insoluble in water shall not exceed 0.2 per cent. Anhydrous soap shall be not less than 62 per cent. Acid number of the mixed fatty acids prepared from the soap, shall be not less than 212. Rosin, sugar and foreign matter shall not be present. The percentage of moisture and volatile matter will be computed on the basis of the soap as received, but all other constituents will be calculated on an assumed moisture and volatile matter content of 34 per cent.

Liquid Toilet Soap (P-S-618a)

Liquid toilet soap shall be a clear solution of pure vegetable oil potash (or potash and soda) soap with or without glycerol or alcohol, suitably perfumed, and free from all foreign matter. It shall quickly form a satisfactory lather and have no injurious effect and leave no objectionable odor on the skin.

The odor shall not be objectionable in the soap as received or in a hot solution of the soap in water. The material shall not leave any objectionable odor on the skin or other surfaces after washing with a water solution of the soap and rinsing thoroughly with plain water. Unless otherwise specified each bidder shall submit with his proposal a one-quart sample, placed in a screw-top glass jar, to show odor, color, and consistency. The sample so furnished shall be kept for comparison with samples from deliveries.

The material shall be a clear solution, free from objectionable odor, other than from coconut oil, and shall form a satisfactory lather. Total anhydrous soap shall be not less than the equivalent of 15 per cent potash soap. Total matter insoluble in alcohol shall not exceed 0.5 per cent. Free alkali calculated as potassium hydroxide (KOH) shall not exceed 0.05 per cent. Chloride calculated as potassium chloride (KCl) shall not exceed 0.3 per cent. More than traces of sulphates and sugar shall not be present. All constituents shall be calculated on the basis of the original sample.

Milled Toilet Soap (P-S-621a)

Milled toilet soap shall be a high grade, milled cake soap as free as possible from water, either colored or uncolored, and mildly perfumed unless otherwise specified, thoroughly saponified, well compressed in firm, smooth cakes of a size and shape specified in the contract. It should lather freely when used with cold, soft water.

Moisture and matter volatile at 105° C. shall not exceed 15 per cent. The sum of free alkali, total matter insoluble in alcohol, and sodium chloride shall not exceed 1.7 per cent. Free alkali, calculated as sodium hydroxide (NaOH), shall not exceed 0.1 per cent. Matter insoluble in water shall not exceed 0.4 per cent. Unsaponified saponifiable matter shall not exceed 0.3 per cent. Anhydrous soap shall be not less than 83 per cent. Sugar and foreign matter shall not be present. Rosin, none. The percentage of moisture and matter volatile will be computed on the basis of the soap as received, but all other constituents will be calculated on the basis of material containing 15 per cent of volatile matter.

Powdered Toilet Soap (for Dispensers) (P-S-626a)

Powdered toilet soap for use in dispensers shall be a thoroughly saponified soap in powdered form, made from soda and fats; shall be uncolored and mildly perfumed, unless otherwise specified; shall be a uniform, free-flowing, noncaking powder; and shall lather freely when used with cold soft water.

The material shall be a uniform powder and shall be freeflowing and noncaking when used in a dispenser conforming to type III or IV of Federal Specification FF-D-396. It shall lather freely when used with soft water at room temperatures. Shall be mildly perfumed, unless otherwise specified. If desired, shall conform to the odor of a sample mutually agreed upon by buyer and seller. The mutually agreed upon sample shall be kept

in an airtight, closed container for comparison with samples from deliveries.

Shall be uncolored, unless otherwise specified. Matter volatile at 105°±2° C. shall not exceed 6 per cent. The sum of free alkali, total matter insoluble in alcohol, and sodium chloride shall not exceed 2.0 per cent. Free alkali, calculated as sodium hydroxide (NaOH), shall not exceed 0.1 per cent. Matter insoluble in water shall not exceed 0.2 per cent. Anhydrous soda soap shall be not less than 91 per cent. Rosin, sugar, and foreign matter shall not be present. The material shall meet the following fineness requirements:

Retained on—	Minimum Per Cent	Maximum Per Cent
No. 12 sieve.....	—	1.5
No. 45 sieve.....	50	—
No. 100 sieve.....	90	—

Toilet Soap-Borax Compound (for Dispensers) (P-S-628)

Soap and borax compound for use in dispensers shall be a uniform mixture of a thoroughly saponified soap and borax ($\text{Na}_2\text{B}_4\text{O}_7 \cdot 10 \text{H}_2\text{O}$); shall be free from added coloring matter and mildly perfumed, unless otherwise specified; shall be a uniform free-flowing, noncaking powder, when used in a dispenser conforming to Type III or IV of Fed. Spec. FF-D-396. It shall lather freely when used with soft water at room temperature. Anhydrous soda soap shall be not less than 23 per cent and not more than 27 per cent. Borax, calculated as $\text{Na}_2\text{B}_4\text{O}_7 \cdot 10 \text{H}_2\text{O}$, shall be not less than 72 per cent and not more than 77 per cent. The pH of a 1 per cent solution by weight of the material in distilled water shall be not less than 9.0 and not more than 10.2 at 25° C., using a glass electrode. Matter insoluble in water shall not exceed 0.2 per cent. Sugar, and foreign matter shall not be present. Rosin none. The material shall meet the following fineness requirements:

Retained on—	Minimum Per Cent	Maximum Per Cent
No. 12 sieve.....	—	0
No. 45 sieve.....	5	—
No. 100 sieve.....	45	—

Manufacturers and Repackers of SOAP and SANITARY COMPOUNDS



***Depend on this Trade Mark
for Products of Guaranteed Quality***



SOLVAY CAUSTIC SODA

The high standard of quality of SOLVAY Caustic Soda, made from soda ash manufactured by the Ammonia-Soda Process, is characteristic of all SOLVAY products. Available in *Solid, Flake, Liquid, Ground and Powdered* forms. If you are equipped to handle and store the liquid form in carload quantities, you will find it more economical—handling costs can be reduced considerably; and more convenient—easier to handle and easier to store.



SOLVAY LIQUID CHLORINE

SOLVAY Liquid Chlorine is an exceptionally pure product. It is used extensively in the manufacture of household bleaches and deodorants.



SOLVAY CAUSTIC POTASH

Manufactured with the most modern equipment, insuring a product of high, unvarying quality. Maintenance of this high quality is assured to your plant door because of the efficient, modern handling methods used by SOLVAY. Buy SOLVAY Caustic Potash in the following forms: *Liquid, Solid, Flake, Lump*. Available in the following grades: liquid (in tank cars) 49-50%—(drums) 45%; dry (solid, flake and lump) 90%.



SOLVAY SNOWFLAKE CRYSTALS*

The ideal product for compounders and repackers, because of its many exclusive features. Every beautiful, true crystal in SOLVAY Snowflake Crystals has a glisten and sparkle . . . a breath-taking eye appeal that creates immediate consumer acceptance. It's free-flowing, dissolves instantly, absorbs dyes readily and takes perfume easily. It mixes well with other ingredients, is an excellent water softener and has special detergent properties. And it's low in cost!



SOLVAY SPECIAL CLEANSERS

SOLVAY manufactures a complete line of Special Cleansers, covering practically every cleansing need for which alkalies can be used. There is a SOLVAY quality Special Cleanser to fill your requirements.



SOLVAY SUPER ALKALIES

Stronger type products than the Special Cleansers. Specially-prepared to perform heavy duty cleaning jobs.



SOLVAY FLUF*

An exclusive SOLVAY process makes Fluf the perfect cleansing product for repacking. It's an extra light, fluffy soda ash—a cubic foot weighs about 23 pounds, which is only $\frac{2}{3}$ as much as a cubic foot of light soda ash!



SOLVAY SODA ASH

A product of high purity, controlled in the manufacturing process by rigid specifications. The high quality of SOLVAY Soda Ash is the result of sixty-four years of experience. *58% Dense and Light.*



SOLVAY PARA-DICHLOROBENZENE

SOLVAY Para-dichlorobenzene is highly effective as a commercial and domestic deodorant, controlling unpleasant and offensive odors. It is also used extensively as a protection against the clothes moth. Can be repackaged in crystal form, or compressed into blocks. *Crystals*—sizes 1, 3, 6, 9.



SOLVAY ORTHO-DICHLOROBENZENE

SOLVAY Ortho-dichlorobenzene is the finest available. Ideal for the manufacture of odor controls, termite controls, sprays and solvents.

FOR HIGH QUALITY PRODUCTS . . . Specify

SOLVAY
TRADE MARK REG. U. S. PAT. OFF.

Soap Powders and Solutions • Bath Crystals
Household Bleaches • Drain Pipe Solvents
Household Cleansers • Industrial Cleansers

SOLVAY SALES DIVISION

ALLIED CHEMICAL & DYE CORPORATION

40 RECTOR STREET

NEW YORK 6, N. Y.

BRANCH SALES OFFICES:

Boston • Charlotte • Chicago • Cincinnati • Cleveland
Detroit • Houston • New Orleans • New York
Philadelphia • Pittsburgh • St. Louis • Syracuse

* Reg. U. S. Pat. Off.

Caustic Soda for Cleaning (P-S-631a)

Caustic soda shall be of but one grade. It shall be furnished in airtight containers (13-ounce cans or drums) in flake, ground, or lump form, as specified in the invitation for bids. It shall conform to the following detail requirements:

Sodium hydroxide (NaOH) shall be not less than 95 per cent.

Carbonate, calculated as sodium carbonate (Na_2CO_3), shall not be more than 2 per cent.

Laundry Soda (Washing Soda) (P-S-641a)

Laundry soda shall be a white uniform powder composed of sodium carbonate and sodium bicarbonate. It shall conform to the following detail requirements:

	Maximum Per Cent	Minimum Per Cent
Total alkalinity, calculated as Na_2O	43	39
Sodium bicarbonate (NaHCO_3)	50	35
Sodium carbonate (Na_2CO_3)	50	35
Matter insoluble in water .....	.1	—

Cleaner Containing Synthetic Detergent for Painted Surfaces (P-C-431)

Cleaner for painted surfaces shall be on one grade and of the following types:

- Type I.—Powder
- Type II.—Flake
- Type III.—Liquid
- Type IV.—Paste

The cleaner shall be a uniform, homogeneous product, free from any objectionable odor, and consisting essentially of synthetic organic detergents. It shall contain no abrasives or fatty acid soaps and shall not be irritating to the skin.

General requirements.—Each bidder shall submit a sample of the cleaner he will deliver for inspection and testing. The cleaner shall be satisfactory for use in cleaning operations with soft, hard or sea water. The manufacturer shall supply with each package a complete set of clear,

concise instructions for the use of the cleaner. The cleaner shall be stable and not lose effectiveness or otherwise deteriorate when stored in closed containers at normal temperatures. pH value of 1.0 per cent distilled water solution (by weight) of the cleaner shall be not less than 5.5 nor more than 10.0. The cleaner shall be free-rinsing. A 0.2 per cent (by weight) solution of the cleaner shall not cause greater than one-half loss in specular gloss of painted surfaces caused by a 0.2 per cent solution of trisodium phosphate. A solution of 50 grams of cleaner per liter, in distilled or sea water, shall exhibit a cleaning efficiency of not less than 80 per cent.

Cleaning Compound (P-C-565) Soap—Abrasive Type for painted surfaces

The product is to be without objectionable odor, and not harmful to the hands. The seller must label each container with directions for use. The product must be capable of being applied either with a damp cloth or sponge. It is to be a uniform soft paste, meeting the following requirements.

Matter volatile at 105°C . shall not exceed 65% by weight. It shall contain not more than 0.1% by weight of free alkali calculated as NaOH. It shall contain not more than 0.5% by weight free acid calculated as oleic acid. Alkaline salts calculated as Na_2CO_3 shall not exceed 5% by weight. Insoluble siliceous matter shall not be less than 25% nor more than 50% by weight. All of the insoluble siliceous matter shall pass through a No. 80 sieve; and not more than 15% shall be retained on a No. 200 sieve. Anhydrous soap shall be not less than 3.5% by weight.

A special test is provided for determination of abrasive properties. A thin film of the compound is spread over a clear microscopic slide. Another slide is placed over the film and the two slides pressed together, using a slight pressure, and

rubbing one slide over the other with a rotary motion. The slides when wiped clean of the compound shall not be scratched.

Grease-Cleaning Compound Solvent-Emulsion Type (P-C-576)

Grease-cleaning compound shall be furnished in two types, Type I, non-phenolic, and Type II, phenolic. The compound shall be uniform liquid and shall be suitable for the purpose intended.

Type I, nonphenolic

Flash point shall be not less than 200°F . (open cup). The compound shall have a neutralization number of not more than 8 (mg. of KOH to neutralize 1 gm. of compound). The compound shall have no free alkali. The pour point shall be not more than 35°F . The loss in weight shall be not more than 10 per cent after a 24-hour period. Shall be free from phenols. Physical and performance tests covering stability of emulsion, solubility in kerosene and in water, etc., are also provided.

Type II, phenolic

As above except that the material is to contain not less than 15 per cent and not more than 25 per cent phenols by volume, and must pass a phenol ($\text{C}_6\text{H}_5\text{OH}$) limitation test.

Mechanics' Paste, Powder And Hand Detergents (P-D-221a)

Detergents for mechanics' use shall be of three types: Type I — hand grit paste detergent; Type II — hand scouring powder with mineral abrasive and Type III — hand scouring powder with vegetable abrasive. Type I shall be a uniform mixture of detergents and mineral abrasives in paste form. Type II shall be a uniform mixture of detergents and mineral abrasives in powder form. Type III shall be a uniform mixture in powder form of clean sawdust or cornmeal, thoroughly saponified soap and/or act-

ive salt-free synthetic detergents, and pine oil. The detergent shall not contain any mineral abrasives such as lava, pumice, sand, quartz, etc. Sawdust, if used, shall be of a granular nature and free from splinters.

Detergents for mechanics' use shall be satisfactory for removing oil, grease, paint, printing inks and other occupational soil from the hands without harmful effect on the skin. They shall lather freely when used with fresh water at room temperature. Detergents in powder form shall be free-flowing and non-caking when used in dispensers conforming to the requirements of Federal Specification FF-D-396 for types III and IV.

The odor shall not be objectionable. If desired, it shall conform to the odor of a sample mutually agreed upon by buyer and seller. The mutually agreed upon sample shall be kept in an airtight, closed container for comparison with samples from deliveries.

For Type I detergent, the percentage of matter volatile at $105^{\circ} \pm 2^{\circ}$ C. will be computed on the basis of the grit paste detergent as received, but with all other constituents will be calculated on the basis of material containing 50.0 per cent of matter volatile at $105^{\circ} \pm 2^{\circ}$ C. Types II and III shall have all constituents reported on the basis of the sample as received.

Special Detergents (P-D-236)

Detergents for manual cleaning of aluminumware shall be of the following classes:

Class A. Non - abrasive cleaner.

Class B. Abrasive cleaner.

The material used in Class A non-abrasive cleaner shall be suitable for any type of manual washing where abrasiveness is not desired, and shall be substantially uniform in appearance throughout. It shall be free from objectionable odor, and shall dissolve readily in tepid water. Cleaner may be supplied in either powder, granule or chip form pro-

Table I.—Detail Requirements for Hand Detergents

	Type I		Type II		Type III	
	Min.	Max.	Min.	Max.	Min.	Max.
Matter volatile at $105^{\circ} \pm 2^{\circ}$ C.....	....	55.0	....	5.0	....	10.0
Alkaline salts (calculated as sodium carbonate) .....	....	3.0	2.0	5.0	....	0.2
Free alkali (calculated as sodium hydroxide) .....	....	0.1	....	0.1	....	0.1
Free acid (calculated as oleic acid)...	....	0.5	....	0.5	....	0.5
Anhydrous soda soap and/or active salt-free synthetic detergents.....	8.0	....	17.0	....	35.0	....
Matter insoluble in water (siliceous matter)	25.0	50.0	60.0	76.0	....	none
Fineness of insoluble siliceous matter; Percent retained on:						
No. 40 sieve .....	....	none	....	none	....	....
No. 60 sieve	10.0	20.0	....	5.0	....	....
No. 80 sieve	30.0	45.0	....	....	....	....
No. 100 sieve	35.0	55.0	....	30.0	....	....
No. 200 sieve	60.0	....	....	60.0	....	....
Matter insoluble in water (sawdust or cornmeal) .....	....	....	....	....	40.0	62.0
Fineness of finished detergent; Percent retained on:						
No. 20 sieve .....	....	....	....	....	....	none
No. 45 sieve .....	....	....	....	....	50.0	....
No. 100 sieve .....	....	....	....	....	90.0	....
Rosin .....	....	....	....	5.0	....	5.0
Sugar .....	....	none	....	none	....	none
Volatile hydrocarbons (pine oil).....	....	....	....	....	3.0	5.0

vided it conforms to the detailed requirements.

The material used in Class B abrasive cleaner shall be suitable for any uses requiring a manual cleaner where soil adheres too tenaciously for non-abrasive cleaners. It may be supplied in the form of a solid, a paste, or a combination of any two of the above. Combinations of metal wools and soaps may be supplied. The cleaner shall be free from objectionable odor and from poisonous or irritant chemicals.

Each bidder shall submit with his proposal a sample of the material that he proposes to furnish. Each sample shall be labeled to show the amount recommended for softening 10 gallons of water containing 10 grains (171 p.p.m.) of hardness, calculated as CaCO_3 , and may be used by the inspector or purchasing officer in the recommended proportions for determining the performance or cleaning ability of the material.

Samples from deliveries shall be subjected to similar tests. If

specified by the purchasing officer, the material, when used in the proportions recommended by the bidder, shall be at least equal in cleaning ability to a standard sample furnished, or indicated, by the purchasing officer.

Class A. Non-Abrasive Cleaner shall conform to the following detail requirements:

Turbidity—The turbidity of the cleaner solution shall conform to the test described in paragraph F-2b (2). (See complete Specification.) **Corrosion**—When tested by the method described in paragraph F-2f (2), the cleaner solution shall be without visible action on bare or anodic oxide-coated aluminum alloy. **Water Softening Capacity**—A suds which is stable for not less than 5 minutes shall be formed when the material is tested as described in paragraph F-2e. **Hydrogen Ion Content**—The pH of a 1 per cent solution by weight of the cleaner in distilled water shall not exceed 10.5 when measured as indicated in paragraph F-2h. **Cleaning Ability**—The material shall

clean satisfactorily when tested as indicated in paragraph F-2a. *Relative Cost*—The relative cost of the cleaner shall be determined from the product of the delivered price per pound of the cleaner and the number of pounds of the cleaner required to treat 1000 gallons of water containing 10 grains (171 p.p.m.) per gallon of hardness, calculated as CaCO_3 . The amount of cleaner used in this computation shall be that required to give the concentration used in paragraphs F-2b (2) and F-2e of this specification.

Class B. Abrasive Cleaner shall conform to the following detail requirements: *Abrasion*—When tested by the method described in paragraph F-2i (See complete Specification) the cleaner shall produce no undesirable scratching. *Corrosion*—When tested by the method described in paragraph F-2f (3), the cleaner shall be without visible action on bare or anodic oxide-coated aluminum alloy. *Rinsibility*—When tested by the method described in paragraph F-2j, the cleaner shall be removed completely from a glass plate. *Cleaning Ability*—The material shall clean satisfactorily when tested as indicated in paragraph F-2a.

Proposed Revisions For Mechanical Dishwashing Compound.

The following specification for mechanical dishwashing compound is now under revision and a new number will be assigned to type I, previously part of specification P-D-236.

The material used in this dishwashing compound shall be of but one grade. It shall include any free flowing form, such as powder, granular crystalline, and flake, and shall be suitable for use in spray type mechanical dishwashing machines. The material shall be thoroughly mixed and present no evidence of segregation of individual constituents, or of lumping or caking.

General Requirements: Bid sample. Unless otherwise specified in the invitation for bids, each bidder shall submit with his proposal

Composition

Constituents	Percent (by weight)	
	Minimum	Maximum
Moisture .....	..	25
Alkali (as Na_2O)	30	45
Phosphates (as P_2O_5)	20	..
Silicates (as SiO_2)	8	..
Carbonates (as CO_2) .....	..	20
Insoluble matter .....	..	1
Total of P_2O_5 , SiO_2 , and CO_2	35	..
Total of Na_2O , P_2O_5 , SiO_2 and CO_2	70	..

a 10-pound sample of the material that he proposes to furnish for the purpose of determining compliance with the requirements of this specification.

Detergent for use in mechanical dishwashing machines shall conform to the following detail requirements:

Stability — Dishwashing compound shall remain stable, free-flowing and usable under conditions varying between -15°C . (5°F .) and 37°C . (100°F .) of storage and shipment in original containers for a minimum of six months after delivery. *Odor* — The dishwashing compound shall be free from objectionable odor in either dry form or in solution. *Abrasion* — Use of the product shall produce no abrasion or undue wear on the surface of utensils, dishes or dishwashing machines. *Toxicity*—Shall be relatively non-toxic and shall not cause irritation of the skin. *Instructions* — Unless otherwise specified, suitable cards, not less than 3×10 inches in size, with the instructions (detailed in the specification) shall be placed inside the top and bottom of each container.

Permissible constituents — Constituents permissible in dishwashing compounds covered by this specification include sodium phosphates, sodium carbonates, sodium metasilicate, moisture, and small proportions of sodium hydroxide. The composition of the material shall be as shown in table above.

Inert constituents — Total inert constituents (other than moisture and insoluble matter), including chlorides (as NaCl) sulphates (as

Na_2SO_4) and other constituents not listed in permissible constituents paragraph, shall not exceed 3 per cent. *pH and buffer capacity*—When tested as described in paragraph F-23, (in the complete specification) the compound solution shall have an initial pH of not less than 10.5 and not higher than 12.0. The addition of 2 ml. of 0.1 N hydrochloric acid shall not reduce the pH of the solution by more than one unit. *Water-softening capacity (ability to prevent precipitation of calcium and magnesium compounds)* — When tested as described in paragraph F-2f of complete specification, the weight of precipitate obtained shall not exceed 11 mg. *Corrosion* — When tested as described in paragraph F-2g of the complete specification, aluminum test specimens shall not be discolored or etched, nor shall a dense white film be formed on the surfaces. Slight dulling of the surfaces, or formation of a faint white film on the test specimens, shall not be interpreted as evidence of nonconformity with the requirement. *Foaming* — A 0.5 percent solution of dishwashing compound shall produce not more than 10 ml. of foam when tested as described in paragraph F-2h of the complete specification. *Lack of lumping or caking and particle size* — At least 99 percent of the material shall pass through a No. 4 standard sieve conforming to the requirements of Federal Specification RR-S-366, when tested by method 210.1 of Federal Specification P-S-536. The particle size of mechanical mixtures of powdered ingredients shall be uniform, in order to minimize segregation of the ingredients.

Sweeping Compound (P-C-591b)

Proposed revision specification.

Sweeping compound shall consist of a uniform mixture of the materials as specified for each type and shall be artificially colored or uncolored as specified by the purchaser. If desired, shall conform to the color of a sample mutually agreed upon by buyer and seller. The material shall not stain flooring surfaces on which it is used.

Type I. — Sawdust- Sand- Mineral Oil.

Odor shall not be objectionable. If desired shall conform to the odor of a sample mutually agreed upon by buyer and seller. The material shall not give off flammable vapors when tested according to paragraph F-2b. Matter volatile at 105-110° C. shall be not more than 10 per cent by weight. Refined mineral oil (such as paraffin oil) shall be not less than 15 per cent and not more than 20 per cent by weight. The acid number (milligrams of KOH per gram of sample) of the extracted oils shall not exceed 17. The saponification number (milligrams of KOH per gram of sample) of the extracted oils shall not exceed 20. Clean, fine, feldspar sand shall be not less than 35 per cent and not more than 50 per cent by weight. Not more than 1 per cent by weight of sand (based on sand content) shall be retained on a No. 20 sieve when tested according to paragraph F-2k. The remainder shall be finely ground sawdust. Not more than 1 per cent by weight of sawdust (based on sawdust content) shall be retained on a No. 8 sieve when tested according to paragraph F-2k.

Type II — Sawdust-Sand-Water wax emulsion.

Odor shall not be objectionable. If desired shall conform to the odor of a sample mutually agreed upon by buyer and seller. The material shall not give off flammable vapors when tested according to paragraph F-2b. Matter volatile at 105-110° C. shall be not more than 12 per cent by weight.

Clean, fine, feldspar sand shall be not less than 60 per cent and not more than 70 per cent by weight. Not more than 1 per cent by weight of sand (based on sand content) shall be retained on a No. 20 sieve when tested according to paragraph F-2k. Finely ground sawdust shall be not less than 5 per cent and not more than 10 per cent by weight. Not more than 1 per cent by weight of sawdust (based on sawdust content) shall be retained on a No. 8 sieve when tested according to paragraph F-2k. The remainder shall be waxes and emulsifying agents.

Liquid Automobile Polish (P-P-546)

Shall be suitable for use on lacquer, baked enamel and synthetic enamel finishes. Shall have no objectionable odor. Shall be a stable aqueous emulsion containing a suitable abrasive in suspension. The polish shall be a free-flowing fluid that can readily be applied with a cotton cloth and shall spread easily. Non-volatile matter, total solids, shall be not less than 25 per cent by weight. Ash content, based on non-volatile, shall be not less than 35 per cent nor more than 50 per cent by weight. No free caustic alkali. Neutralization number shall be not more than 5. All of the material shall pass through a No. 200 sieve, and not less than 95 per cent, based on ash content, shall pass through a No. 325 sieve. Volatile matter shall be essentially water. Physical and performance tests are also specified.

Liquid Furniture Polish (P-P-552)

The polish shall be free from abrasives and suitable for use on finishes on wood and metal furniture. It shall have no objectionable odor. It shall be a stable colloidal emulsion of oil in water. It shall be a free-flowing fluid that can readily be applied with a cotton cloth and easily spread. Non-volatile matter shall be not less than 40 per cent by weight, and shall be essentially a well-refined petroleum

oil. Ash content, based on non-volatile matter, shall be not more than 1 per cent by weight. Volatile matter shall be essentially water. No free caustic alkali shall be present. The saponification number shall be not more than 30. Physical and performance tests are also specified.

Metal Polish (P-P-556a)

Metal polish shall be of the following types:

Type I. Powder.

Type II. Liquid

Type III. Paste.

Metal polish of each type shall be of but one grade. It shall be a product, with or without a finely divided abrasive, suitable for the removal of tarnish from brass, nickel, copper, and other metals and capable of producing a luster thereon.

All types of metal polish shall have good tarnish removing properties, good luster-producing properties, shall give good protection to the polished surface against tarnishing influences, and shall be so constituted and prepared that, by reason of application and polishing, they—

- (1) Shall not scratch metals.
- (2) Shall not leave the metal discolored or caked with abrasive material.
- (3) Shall not be detrimental in any manner to metals.

(4) Shall not show any unnecessary caking of type I or III polish in the containers. The abrasive material in liquid (Type II) polish, shall show no caking in the container, which cannot be readily put into suspension by thoroughly shaking the containers. The abrasive material shall be of such particle size that 100 per cent will pass through a No. 200 sieve.

Metal polish shall be free from acids, cyanide of potassium or other cyanides, grit, or other ingredients having detrimental effects on metals. Shall clean quickly, leaving a bright polished surface, with a full luster for the material being polished. When so specified the tarnish-removing and luster-producing properties shall be equal

in quality to those of a standard sample furnished or approved by the purchaser. The polished surface shall remain free from corrosion or discoloration for a period of at least 24 hours.

Polish shall have good keeping qualities and be guaranteed for 1 year from the date of actual receipt at point of delivery. During the guaranty period the successful bidder shall replace without cost any metal polish which through deterioration, evaporation, caking in the container, or other causes, becomes unfit for use. Replacement metal polish shall also be guaranteed for 1 year from date of receipt. The metal polish will be stored in original unopened shipping containers, not subjected to freezing temperature or to excessive artificial heat. The amount of volatile matter, at 105° to 107° C., in either type II or III polish, shall not exceed 70 per cent by weight, of the polish. The flammability of the liquid contents of types II and III polishes shall not be not less than 39° C.

Silver Polish (P-P-571b)

Silver polish shall be of the following types:

Type I. Liquid.

Type II. Paste.

Type III. Powder.

Silver polish shall be of but one grade, and shall consist solely of finely ground diatomaceous or infusorial earth, prepared as a powder (Type III) or suitably compounded with a neutral soap, to produce a liquid (Type I) or paste (Type II).

All types of silver polish shall have—

(a) Good tarnish-removing properties.

(b) Good luster-producing properties and shall be so constituted and prepared that by reason of application and polishing, they—

(1) Shall not scratch silver ware.

(2) Shall not leave silver discolored.

(3) Shall not leave any residue (which will cause discoloration),

not removable by washing in warm soapy water.

(4) Shall not show any unnecessary caking of Type II or III polish in the containers. The abrasive material in liquid (Type I) polish, shall show no caking in the container which cannot be readily put into suspension by thoroughly shaking the containers.

The diatomaceous or infusorial earth in all types of silver polish shall be of such particle size that 100 per cent will pass through a No. 200 sieve.

Silver polish shall be free from acids or cyanides. Shall clean quickly leaving a bright polished surface, with a full luster for the material being polished. It shall have good keeping qualities and be guaranteed for 1 year from the date of actual receipt at point of delivery. During the guaranty period the successful bidder shall replace, without cost, any silver polish which through deterioration, evaporation, caking in the container or other causes, becomes unfit for use. Replacement silver polish shall also be guaranteed for 1 year from date of receipt. The silver polish will be stored in original unopened shipping containers not subjected to freezing temperature or to excessive artificial heat. The amount of volatile matter, at 105° to 107° C., in either Type I or II polish, shall not exceed 70 per cent by weight, of the polish. The flammability of the liquid contents of Types I and II polishes shall be not less than 39° C.

Stove Polish (P-P-576)

Stove polish shall produce a deep, lustrous black color when applied as directed by the manufacturer. It shall produce no odors upon burning and shall produce a durable coating that will not readily be burned off.

Type I.—Polish, stove, liquid, shall be of such consistency that the addition of a fluid will not be necessary in order to make it free-flowing. The vehicle of the polish shall be a non-inflammable liquid.

Type II. — Polish, stove,

paste, shall be non-inflammable and shall be of such consistency that it can be readily applied.

Type III. — Polish, stove, powder, shall readily form a paste with water, and shall be non-inflammable.

Type IV. — Polish, stove, cake, shall readily disintegrate in water and form a paste and shall be non-inflammable.

Scouring Powder for Floors (P-P-591a)

Scouring powder for floors shall be of the following types, as specified: Type I—for fine marble floors; Type II—for tile or ceramic and terrazzo floors; Type III—soap scouring compound.

Type I—(For fine marble floors).

Matter volatile at 105° ±2° C. shall not exceed 10 per cent. The sum of sodium carbonate (Na_2CO_3) and anhydrous soap and/or active anhydrous salt-free synthetic detergent shall not exceed 7 per cent nor be less than 2 per cent. Free alkali, calculated as sodium hydroxide (NaOH) shall not exceed 0.1 per cent. Insoluble siliceous material shall be not less than 85 per cent nor more than 95 per cent. All of the insoluble siliceous material shall pass through a No. 100 sieve, and the residue retained on a No. 200 sieve shall not exceed 5 per cent. The material shall not scratch nor discolor marble.

Type II—(For tile or ceramic and terrazzo floors).

Matter, volatile at 105° ±2° C. shall not exceed 10 per cent. The sum of sodium carbonate (Na_2CO_3) and anhydrous soda soap and/or active anhydrous, salt-free synthetic detergent shall not be less than 2 per cent. Free alkali, calculated as sodium hydroxide (NaOH), shall not exceed 0.1 per cent. Insoluble siliceous material shall be not less than 80 per cent nor more than 95 per cent. The insoluble siliceous material shall not yield more than 1 per cent of residue retained on a No. 60 sieve and not more than

10 per cent of residue retained on a No. 80 sieve.

Type III — (Soap scouring compound).

Matter volatile at $105^{\circ} \pm 2^{\circ}$ C. shall not exceed 6 per cent. Carbonated alkali, calculated as sodium carbonate (Na_2CO_3), shall not be less than 6 per cent nor more than 20 per cent. Free alkali, calculated as sodium hydroxide (NaOH), shall not exceed 0.1 per cent. Anhydrous soap and/or active anhydrous salt-free synthetic detergent shall be not less than 3 per cent nor more than 10 per cent. Insoluble siliceous material shall be not less than 60 per cent nor more than 90 per cent. The insoluble siliceous material shall not yield more than 1 per cent of residue retained on a No. 60 sieve and not more than 10 per cent of residue retained on a No. 80 sieve.

Scouring Powder for Glass (P-P-596a)

Shall be a fine, uniform powder, and shall be suitable for cleaning highly polished glass surfaces which must transmit light efficiently, such as cabin windows and windshields of aircraft.

The material shall clean glass surfaces satisfactorily without scratching the glass or leaving an oily or other film on the surface. The material shall be a uniform, free-flowing powder, shall be scented or unscented, and shall be white or light gray in color. Matter volatile at $105^{\circ} \pm 2^{\circ}$ C. shall not exceed 4 per cent. Alkali as alkaline salts (total alkalinity of matter insoluble in alcohol), calculated as sodium carbonate (Na_2CO_3), shall not exceed 5 per cent. Free alkali, calculated as sodium hydroxide (NaOH), shall not exceed 0.1 per cent. Insoluble siliceous material shall be not less than 85 per cent nor more than 93 per cent, and shall consist of ground feldspar or other insoluble siliceous abrasive that will not scratch highly polished glass surfaces. All of the insoluble siliceous material shall pass through a No. 200 sieve. Rosin, sugar, and foreign matter shall not be present. Anhydrous soda soap

shall be not less than 4 per cent and shall be within 1 per cent of the difference between 100 and the sum of the matter volatile at $105^{\circ} \pm 2^{\circ}$ C., insoluble siliceous material, and alkali as alkaline salts.

Floor Oil; Mineral (P-O-361)

Floor oil shall be a straight-run petroleum distillate suitable for use on wood floors. It shall have no objectionable odor; and may be perfumed with cedar oil, pine oil, or similar materials, when specified. It shall be a clear well-defined petroleum oil free from sediment and other foreign material, and shall meet the following requirements:

The viscosity shall be not less than 70 nor more than 110 seconds (Saybolt Universal) at 100°F . The flash point shall be not less than 300°F . (open cup). The color shall be not darker than 3 N. P. A. (Lemon pale) (ASTM No. 3). The pour point shall be not more than 30°F . The saponification number shall not exceed 1.

Floor Wax; Solvent-Type, Liquid (With Resins) (P-W-134)

The liquid wax shall dry to a film that polishes easily to a hard lustrous flexible surface. It shall not be so highly colored as to stain the surface, and shall dry within 45 minutes to a semi-transparent, non-tacky film which shall show no signs of whiteness. It shall consist essentially of blended waxes with small amounts of resins in a volatile organic solvent. It shall be a heavy bodied liquid mixture of sufficient fluidity to permit freedom of application at 20° to 25° C. There shall be no appreciable settling of the suspended material. The liquid wax shall be smooth and shall be free

from hard particles and granules.

Nonvolatile Matter (Total Solids).—There shall be not less than 11%, by weight, of nonvolatile matter in the liquid wax. The non-volatile material shall meet the requirements shown in the table above:

Volatile Organic Solvent (Vehicle).—Shall consist of turpentine or volatile petroleum distillates, or any mixture thereof. The flash point of the volatile solvent shall be not less than 28° C. (closed cup).

Physical and Performance Tests.—Shall meet tests specified in paragraph F-2b.

Water Emulsion Floor Wax P-W-151b)

New proposed Federal Specification.

The floor wax shall dry to a non-tacky, lustrous finish without rubbing, buffing, or polishing. The film produced shall adhere firmly to the surface without checking, cracking, or peeling and shall be transparent and practically colorless. The floor wax shall be suitable for use on sealed floors and resilient flooring of all kinds. It shall have no objectionable odor. It shall be a stable aqueous colloidal emulsion of waxes. The emulsion shall be a free-flowing fluid that can readily be applied with an applicator such as lamb's wool, cotton cloth, or a mop to spread easily and uniformly.

The floor wax shall meet the following requirements:

Nonvolatile matter (total solids).—Shall be not less than 12 per cent.

Wax content and softening point.—The wax content of the total solids shall be not less than 65 per cent, by weight, and shall have a softening point of not less than 80° C.

Ash content (based on non-

Requirements for Non-Volatile in P-W-134

	Minimum	Maximum
Softening Point	71° C	..
Acid Value .....	..	18
Saponification Value	40	85
Iodine Number (WIJS)	15	22
Ash Content, Per Cent.....	..	0.5

volatile matter content).—Shall not exceed 3.5 per cent.

Volatile solvents.—Shall be free from petroleum distillates and other organic volatile solvents. The distillate shall consist of not less than 99 per cent of water.

Sediment.—Shall be not more than 2 per cent (by volume).

Alkalinity.—The pH range shall not be greater than 10.0 nor less than 7.0.

Stability.—Shall show no gelling or separation.

Physical and performance tests are also provided.

Floor Wax (P-W-158)

New proposed revised Federal Specification.

The product shall dry to a film that polishes easily to a hard lustrous flexible surface. It shall not be so highly colored as to stain the surface; and shall dry within 45 minutes to a semitransparent non-tacky film which shall show no signs of whiteness. Floor wax shall consist essentially of blended waxes in a volatile organic solvent. It shall be free from rosin.

Type I (liquid).—Shall be a heavy bodied liquid mixture of suitable consistency to permit freedom of application at 20° to 25° C. There shall be no appreciable settling of the suspended material. The liquid wax shall be smooth and shall be free from hard particles and granules. There shall be not less than 11 per cent, by weight, of non-volatile matter in the liquid wax. The nonvolatile matter shall meet the following requirements:

	Minimum	Maximum
Softening point	75° C.	—
Ash content, per cent.	—	0.5

The solvent shall consist of turpentine or volatile petroleum distillates, or any mixture thereof. The flash point of the volatile solvent shall be not less than 28° C. Physical and performance tests are also provided.

Type II (paste).—Shall be a semi-solid material at 20° to 22° C. There shall be no separation of liquid

from paste. The paste shall be smooth and shall be free from hard particles and granules. There shall be not less than 20 per cent, by weight, of non-volatile matter in the paste wax. The nonvolatile material shall meet the following requirements:

	Minimum	Maximum
Softening point	71° C.	—
Ash content, per cent.	—	0.5

The vehicle shall consist of turpentine or volatile petroleum distillates, or any mixture thereof. The flash point of the volatile solvent shall be not less than 28° C. Physical and performance tests are also provided.

Floor Sealer (Lacquer Type) (TT-S-171)

The manufacturer is given wide latitude in the selection of raw material and processes of manufacture, provided that the sealer produced meets the requirements and tests. The product, when applied in accordance with directions shall satisfactorily seal the pores of the wood leaving the wood surface in such condition as to provide a satisfactory foundation for a finishing material such as varnish, liquid or paste wax or water-emulsion wax. It shall be "natural" in color and of sufficient fluidity to permit application with a bristle brush or lamb's wool mop.

The floor sealer shall be a clear liquid free from sediment or suspended matter and shall be of such fluidity that no further thinning will be required. It shall meet the following requirements:

Nonvolatile matter.—Not less than 14 per cent.

Set-to-touch. In not more than 15 minutes.

Dry hard and tough.—In not more than 3 hours.

Nitrocellulose.—Not less than 20 per cent by weight of the non-volatile content.

Toughness.—Air-dried film on metal shall withstand rapid bending over a rod 3 mm. ($\frac{1}{8}$ inch) in diameter.

Viscosity.—Not more than 0.220 poise.

Performance tests are also specified.

Wood and Cork Floor Sealers (TT-S-176a)

Floor sealers shall be furnished in one grade and two classes for use on wood and cork floors as follows: Class 1 — minimum non-volatile content 40 per cent; Class 2 — minimum nonvolatile content 25 per cent. The manufacturer is given wide latitude in the selection of raw materials and processes of manufacture, provided that the sealer produced meets the requirements and tests described in this specification.

When applied in accordance with directions the product shall satisfactorily seal the pores of the flooring by absorption, leaving no apparent surface film and shall provide a satisfactory foundation for a finishing material such as varnish, liquid or paste wax, or water-emulsion wax. Unless otherwise specified, floor sealer shall be furnished "natural" in color. Floor sealer shall have sufficient fluidity to permit application with a bristle brush or lamb's wool mop.

Both classes of sealers shall be nonpigmented materials and shall be capable of being thinned with turpentine or mineral spirits. The respective sealers shall meet the following requirements: *Nonvolatile matter*—Class 1, not less than 40 per cent; Class 2, not less than 25 per cent. *Set to touch*—in not less than 1 hour and not more than 4 hours. *Dry, hard and tough*—in not more than 18 hours. *Water test*—The sealer shall meet specified cold water test.

Toughness—Shall pass a 75 per cent Kauri reduction test at 25° C. (77° F.).

Flash point—Shall be not below 30° C. (86° F.). (Closed-cup.)

Viscosity at 25° C.—Class 1, not more than 0.50 poise; Class 2, not more than 0.220 poise.

Skinning—Shall be negligible when received and after 48 hours in

a tightly closed half-filled container.

Odor—The odor in the can, during drying, and/or after drying shall not be abnormally offensive or disagreeable.

Performance tests are also specified.

Liquid Insecticide (Fly Spray) (O-I-541a)

The insecticide shall not cause irritation to man nor be poisonous to man when applied in the usual manner. It shall have no greater detrimental action on metal or paint surface than a specified test solvent. It shall have no objectionable odor. It shall be formulated from a petroleum distillate base, free from kerosene odor and practically free from all odor, shall be clear and free from suspended matter and shall contain active ingredients so that it will test not more than 2 per cent below the O.T.I. in average percentage knock-down and at least 16 per cent above the O.T.I. in average percentage kill.

Initial boiling point shall not be below 350° F. and end point not above 530° F. Flash point shall be not less than 125° F. (closed cup). No residual odor shall be present, under a specified test. The product shall meet specified test for staining properties and corrosion.

Liquid Insecticide (Household) (O-I-546a)

The specification follows closely along the lines of the specification for O-I-541a, with an addition requirement as follows, covering minimum pyrethrin content "There shall be not less than 0.13 gram of Pyrethrin I with the normally accompanying amount of Pyrethrin II in 100 ml. of the liquid insecticide. Any additional ingredients which when incorporated in the product will comply with the requirements of this specification may be used to bring the strength of the product up to the performance requirements." The performance test specifies that it must test not more than 2% below the O.T.I. in knock-down and at least equal to the O.T.I. in kill.

Shaving Cream and Soap (FFF-C-641)

Shaving soap and cream shall be of the following types and classes:

Type I. Soap:

Class (A)—Cakes.

Class (B)—Stick.

Class (C)—Powder.

Type II. Cream:

Class (A)—Lather cream.

Class (B)—Brushless cream.

Shaving soaps, Type I, shall be high-grade products free of caustic alkalinity that yield a heavy, creamy lather that will remain moist upon the face until the shaving is completed. In the case of Class B (stick), the soap shall adhere to the face when the stick is moistened and rubbed thereon. In the case of class C (powder), the material shall be free-flowing and shall not cake in the container.

Lather cream — Class A, shall be a soft, uniform cream or paste free from free alkali. It shall distribute well into the bristles of a shaving brush and shall yield a heavy creamy lather that will re-

main moist upon the face until the shaving is completed.

Brushless cream—Class B shall be a soft, uniform cream or paste free from free alkali.

Type I. Shaving soap, Classes A, B, and C—

Color—shall be as specified by the purchaser. **Odor**—shall be pleasant and shall be as specified by the purchaser. **Lathering quality**—shall be satisfactory. Shall conform to the following test:

Shake 100 ml of a 0.2 per cent (based on the nonvolatile matter) solution of the soap (Type I, classes, A, B, and C and Type II, class A) in distilled water at room temperature in a stoppered 200-ml graduated cylinder 30 times in 15 seconds, and let stand at room temperature for 1 hour. The volume of foam above the liquid shall extend to the top of the cylinder and shall not decrease more than 10 per cent of its original volume in 1 hour.

Caking (Class C only)—The material shall be free-flowing and shall not cake in a closed container at room temperature.

Type II. Shaving cream. Classes A and B—

Color—shall be as specified

Detail Requirements for Shaving Soap

TYPE I	Classes A and B cake and stick Class C powder			
	Min.	Max.	Min.	Max.
	Per Cent	Per Cent	Per Cent	Per Cent
Matter volatile at 105° C.....	—	10	—	2
Matter insoluble in hot 95 per cent ethyl alcohol.....	—	.8	—	.8
Free alkali	—	None	—	None
Free fatty acids (calculated as stearic acid).....	—	1.0	—	1.0
Matter insoluble in hot distilled water.....	—	.4	—	.4
Anhydrous soap (calculated as potash soap).....	87	—	96	—
Amount passing a No. 20 sieve.....	—	—	100	—

Detail Requirements for Shaving Cream

TYPE II	Class A lather cream		Class B brush- less cream	
	Min.	Max.	Min.	Max.
	Per Cent	Per Cent	Per Cent	Per Cent
Moisture (toluene distillation method).....	—	50	—	70
Matter insoluble in hot 95 per cent ethyl alcohol.....	—	.3	—	—
Free alkali	—	None	—	None
Free fatty acid (calculated as stearic acid).....	—	6.5	15	—
Matter insoluble in hot distilled water.....	—	.3	—	—
Anhydrous soap (calculated as potash soap).....	40	—	—	—

by the purchaser. *Odor*—shall be pleasant and shall be as specified by the purchaser.

Lathering quality (Class A only)—shall be satisfactory. Shall conform to the test described above.

Type I. Shaving soap, Classes A, B, and C—shall conform to the detail requirements shown in the accompanying table.

The percentage of volatile matter shall be computed, and reported on the soap as received. The percentages of all other constituents shall be calculated and reported on an assumed volatile matter content of 10 per cent for Classes A and B and of 2 per cent for Class C.

Technical Trisodium Phosphate (O-T-671a)

Technical trisodium phosphate shall be a white, uniform product and may be either granular, flake, or crystalline.

It shall contain not less than 98 per cent of trisodium phosphate calculated as $\text{Na}_3\text{PO}_4 \cdot 12\text{H}_2\text{O}$, from the total phosphoric anhydride

(P_2O_5). It shall conform to the following detail requirements:

	Minimum Per Cent	Maximum Per Cent
Trisodium phosphate, calculated as $\text{Na}_3\text{PO}_4 \cdot 12\text{H}_2\text{O}$, from total P_2O_5	98	—
Total alkalinity to methyl orange, calculated as Na_2O	16	19
Phosphoric anhydride (P_2O_5)	18.3	—
Matter insoluble in water	—	0.1

SOAP SALES (From Page 157)

pie second spot in volume of soap shipped. In the first three months of 1947, 686,688,184 pounds of soap other than liquid, having a sales value of \$162,211,579, were delivered. The third quarter figures showed 696,506,000 pounds of non-liquid soap, worth \$144,564,000, shipped. In last place from the standpoints of volume of soap shipped and worth was the second three months of 1947, when 634,674,816 pounds of soap, having a

sales value of \$144,058,421, were reported.

Sales and deliveries of liquid soaps were nearly a million gallons smaller in 1947 than in 1946. Sales value of liquid soaps was about \$650,000 under the 1946 figure in 1947. Shipments of liquid soap and their worth by quarters during 1947 follow: 967,655 gallons at \$1,122,638; 679,000 gallons at \$1,013,000; 817,000 gallons at \$999,000, and 636,000 gallons at \$809,000. The year's total of 3,109,000 gallons, worth \$3,944,000, compares with 4,011,000 valued at \$4,599,571 for 1946.

FAT AND OIL USE (From Page 155)

year. Lard was another fat that fluctuated markedly, its use going from only 744,000 pounds in 1946 to nearly six million pounds the following year. Oleo oil dropped from three million pounds in 1946 to 40,000 pounds in 1947. Olive oil consumption in 1947, still small, was about the same as in 1946.

All dressed up...

ALL dressed up and no place to go! Like good advertising in the wrong place, — it doesn't go anywhere. Copy, layout, space, — all wasted if the right people don't see it. And that's where business and industry publications come in. With their concentrated and specialized circulations, they reach SPECIFICALLY the right people. All dressed up, — and they also go places!

If it happens to be the field of soap products, detergents, cleansers, insecticides, floor products, and allied chemical specialties which you want to reach with your advertising, you can dress up and really go places through the pages of



SOAP and Sanitary Chemicals 254 WEST 31st ST., NEW YORK 1

Soap and Detergent Definitions

American Society for Testing Materials
Committee D-12 on Soaps and Other
Detergents.

Standard Definitions of TERMS RELATING TO SOAPS AND OTHER DETERGENTS

A.S.T.M. Designation: D 459-45T

Issued, 1937; Revised 1938, 1939, 1940,
1941, 1942, 1943, 1944, 1945, 1946,
1947; Made standard 1948.

Alkaline Detergent—A water-soluble
alkali or alkaline salt having detergent
properties, but containing no soap.

Anhydrous Soap—Soap, free from water
and all other concomitants.

Note—The word "anhydrous" usually
means free from water, but in the soap
industry it has the additional meaning
stated.

Buffer Action—The resistance of a solu-
tion to change in pH.

Builder—A material added to soap or
synthetic detergent to improve its effec-
tiveness under the conditions of use.

Cleaning—A process of removing un-
desirable matter.

Detergency—Effectiveness of cleaning.

Detergent—A composition which cleans.

Detergent, Anionic—A detergent which
produces negatively charged colloidal ions
in solution.

Detergent, Cationic—A detergent which
produces positively charged colloidal ions
in solution.

Detergent, Non-Ionic—A detergent
which produces electrically neutral col-
loidal particles in solution.

Dispersing Agent—A material which
increases the stability of a suspension of
particles in a liquid medium.

Dry Cleaning—Cleaning fabrics in a
substantially non-aqueous liquid medium.

Dry-Cleaning Detergent—(Dry-Clean-
ing Aid)—A detergent which when added
to a dry-cleaning solvent increases clean-
ing effectiveness.

Emulsifying Agent—A material which
increases the stability of a dispersion of
one liquid in another.

Foaming Agent—A material which in-
creases the stability of a suspension of
gas bubbles in a liquid form.

Filler—A material added to a soap or
other detergent which does not improve
its attractiveness or its effectiveness under
the conditions of use.

Penetrating Agent—A material which
increases the penetration of a liquid me-
dium into a porous material.

Scouring—A wet process of cleaning by
chemical or mechanical means, or both.

Soap—The product formed by the sa-
ponification or neutralization of fats, oils,
waxes, rosins, or their acids with organic
or inorganic bases.

Note—Various descriptive adjectives
are applied to the name soap to indicate
certain characteristics as follows:

- (a) Method of manufacture, for example,
boiled soap, cold-process soap.
- (b) Physical form, for example, bar soap,
chip soap, liquid soap, powdered
soap.
- (c) A special property, for example,
floating soap, low-titer soap, milled
soap, soft soap.
- (d) A particular ingredient, for example,
grit soap, tar soap.
- (e) A particular application, for ex-
ample, automobile soap, dry-cleaning
soap, salt-water soap.

Soap, Blended—(for example Blended
Palm Oil Soap)—A soap in which more
than half but not all the fatty acid stock
is from the source stated.

Soap, Built—A mixture of soap and one
or more builders containing not less than
50 per cent of anhydrous soap.

Soap Powder—A mixture in powdered
form of soap and one or more alkaline
detergents, but principally composed of
the latter.

Soap, Straight—(for example Straight
Palm Oil Soap)—A soap in which the
fatty acid stock is solely from the source
stated.

Soil—Undesirable matter to be removed
by cleaning.

Soil Redeposition—Deposition of re-
moved soil on a surface during a cleaning
process.

Surface Active Agent—A material
which when added to a liquid medium
modifies the properties of the medium at a
surface or interface.

Note—Surface Active Agent is the gen-
eral term which includes soluble deter-
gents in liquid medium, dispersing agents,
emulsifying agents, foaming agents, pen-
etrating agents and wetting agents.

Synthetic Detergent—A detergent pro-
duced by chemical synthesis and com-
prising an organic composition other
than soap.

Titer (pron. te'ter) (of fatty acids)—
The maximum temperature achieved dur-
ing the solidification of fatty acids, which
have been cooled below the melting point
by a standardized procedure.

Washing—Cleaning in an aqueous me-
dium.

Water-Break—Failure of water to
maintain a continuous film on metallic,
vitreous or similar surfaces on withdraw-
ing from clean water.

Wet Cleaning—A term used in the dry
cleaning industry to denote cleaning in an
aqueous medium.

Wetting Agent—A material which
increases the spreading of a liquid me-
dium on a surface.

Whiteness-Retention—Comparative
whiteness of original and cleaned fabric.

HOW TO REGISTER

(From Page 163)

acid. This information has been re-
quested for the convenience of mixers
and the assistance of State or Fed-
eral authorities who may be called on
for information about the product.
Kansas and Oregon require a state-
ment giving the weight per gallon on
liquid herbicides. This is useful in-
formation for all and has been in-
cluded in Figure 4. (p. 163)

The supplemental information
as shown on the data sheets includes
items required by certain states and
should be useful to state officials gen-
erally. The heading provides a suit-
able place for special comments such
as "Manufacture of this product has
been discontinued but registration is
necessary because of shelf stocks."

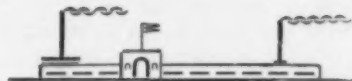
Cover sheets and product data
sheets have been discussed. In almost
every case labels and labeling must
also be submitted. The instructions
must be read carefully to be sure that
the required number of cover sheets,
data sheets and labels are submitted.

The new Association of Eco-
nomic Poisons Control Officials sup-
ports the new procedure and has ap-
pointed a committee to further its ac-
ceptance in all states requiring regis-
tration. It is expected that adoption
will be general in 1948. The new pro-
cedure should benefit all concerned
but to make it work and avoid un-
necessary difficulties all must read
the laws, regulations and instruc-
tions.

ALLIED STEEL & EQUIPMENT CO.

1007 Springfield Avenue, Irvington, N. J.

BUYS AND SELLS



Equipment for YOUR plant

TANKS OF ALL KINDS

- jacketed •
- glass lined •
- stainless •
- mixing •
- pressure •
- aluminum •

SALE OR PURCHASE OF ALL TYPES

of

EQUIPMENT for your

- Mixing
- Heat Transfer
- Material Handling
- Fluid Handling
- Separation
- Control
- Packaging
- Misc. Physical Operations

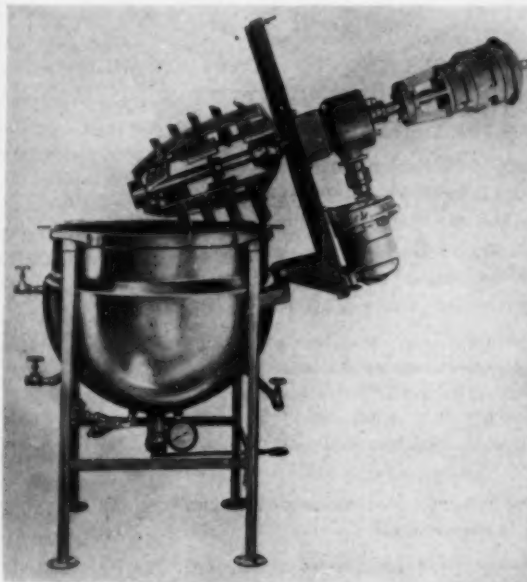
INQUIRIES INVITED

Allied Steel & Equipment Company
CHEMICAL EQUIPMENT

1007 Springfield Avenue

Irvington 11, New Jersey

AGI-MIXER



THE AGI-MIXER IS A TRIUMPH IN ENGINEERING DESIGN

Integrating into a single piece of processing equipment many features of heat transfer and mixing action that are unique.

Combines high speed turbulizing and emulsifying action of the Eppenbach Homo-Mixer, with the sweeping, scavenging mix of single or double motion paddle mixers equipped with fitted scraper blades. Constructed so that the paddles and turbine Homo-Mixer may be operated independently or as one unit—geared through a sanitary, completely enclosed, ball bearing type gear box.

All contact surfaces normally furnished from highly polished, satin finish, corrosion resistant stainless steels. Monel, Hastelloy or other alloys quoted on request.

Supplied with single shell, jacketed kettles, or fitted to your mixing container. Mixer designed to tilt out of vessel.

Quotations furnished upon receipt of specifications concerning viscosity, specific gravity, batch size, and desired kettle accessories.

Vacuum and air tight installations quoted upon request.

EPPENBACH, INC.

45-10 Vernon Blvd.

Long Island City, N. Y.

Perfuming Material Specifications

*Specifications and Standards Prepared
By The Essential Oil Association for
Several Important Essential Oils*

BOOK OF SPECIFICATIONS & STANDARDS NOTES

Descriptive Characteristics: The statements concerning descriptive characteristics given in the individual monographs are not intended as standards or tests for purity.

Specific Gravity: Unless otherwise specified the figure $\frac{\text{15}^\circ \text{C.}}{\text{15}^\circ \text{C.}}$ is used as the

basis for the specifications and standards that follow. A correction factor of .0007 must therefore be applied for each degree.

Optical Rotation: The figures given in the monographs are at room temperature approximately 20° C.

Refractive Index: The figures given are at room temperature approximately 20° C. unless otherwise specified.

Solubility: The figure given in the monographs are at 25° C. unless otherwise specified.

Mineral Oil: The mineral oil used in the solubility definition has a viscosity at 100° C. of

65

—
75

Solvents: The solubility in fixed and volatile oils, and in such solvents as mineral oil, benzyl benzoate, glycerine and propylene glycol appearing in the monographs are listed, for the sake of uniformity, in alphabetical order.

Specifications and Standards for Oil Bois de Rose Brazilian Other General Name

Oil Rosewood.

Botanical Nomenclature

1. Indefinite.
2. Possibly:
 - (a) ANIBA ROSAEODORA var. Amazonica (Ducke), Family: Lauraceae.
 - (b) ANIBA PARVIFLORA (Mez), Family: Lauraceae.
 - (c) OCOTEA CAUDATA (Mez.) (LICARIA GUIANENSIS) (Aubl.), Family: Lauraceae.
 - (d) PROTIUM (ICICA) ALTISIMUM (March), Family: Burseraceae.

Preparation

By steam distillation of wood.

Physical and Chemical Constants

Specific Gravity @ 15° C.: 0.8750—0.8950
Optical Rotation —4° to +5°

Refractive Index @ 20° C.: 1.4620—1.4685

Total Alcohols: 84 to 92%

Proceed as directed for the determination of Linalool and oils containing Linalool. See Page C. Use approximately 1.2 gms. of acetylated oil accurately weighed for the subsequent saponification.

Solubility—Soluble in some dilution between 3.5 and 6 volumes of 60% alcohol and in 2 volumes of 70% alcohol.

Color and appearance—Pale yellow to yellow liquid.

Descriptive Characteristics

Stability:

Alkali: Relatively stable to alkali, although some change takes place.

Acids: In the presence of some organic acids esterification of the alcohol takes place. In the presence of many strong inorganic acids, decomposition takes place. Degree of change depends upon conditions.

Solubility

Benzyl Benzoate: Generally soluble.

Fixed Oils: Soluble in all proportions in most fixed oils.

Glycerine: Slightly soluble.

Mineral Oil: It is usually soluble in $\frac{3}{4}$ volume of mineral oil, but sometimes becomes opalescent to turbid; when further additions of the solvent are made.

Propylene Glycol: Soluble in all proportions.

Containers

Should be shipped in glass, tin lined or aluminum containers. Good quality galvanized containers are suitable when long storage is not contemplated.

Storage

Store preferably in well stoppered full containers, in a cool place protected from light.

Specifications and Standards for Oil Petitgrain Paraguay Other General Names

Oil Petitgrain South American.

Botanical Nomenclature

Citrus bigaradia, Risso.

Preparation

Obtained by steam distillation from the leaves and twigs of the bitter orange tree; at times the fruit adhering to the branches is distilled with it, indicated by a dextrorotation due to some peel oil.

Physical and Chemical Properties

Color: Yellowish to slightly brown.

Specific Gravity @ 15° C.: 0.885 to 0.895.

Optical Rotation: Mostly laevorotatory up to —3° sometimes dextrorotatory up to +3°.

Solubility: Soluble at some dilution between 2 and 4 volumes of 70% alcohol; however, upon further dilution it frequently becomes opalescent or turbid.

Refractive Index @ 20° C.: 1.4580 to 1.4650.

Esters: 45% to 55% (occasionally as low as 40% and as high as 60%).

Proceed as directed for the determination of esters (see page A), using approximately 2 grams of the oil, accurately weighed. The number of cc. of 0.5 N alcoholic potassium hydroxide consumed in the saponification, multiplied by 0.0981, indicates the number of grams of esters, calculated as linalyl acetate, in the oil taken for assay.

Descriptive Characteristics

Stability:

Alkali: Unstable in alkalies due to the hydrolysis of some of the esters and the liberation of free linalool and other alcohols.

Acids: In the presence of some organic or inorganic acids a change is noted, degree of change depending upon conditions.

Solubility:

Benzyl Benzoate: Soluble in all proportions.

Fixed Oils: Soluble in all proportions in most fixed oils.

Glycerine: Slightly soluble.

Mineral Oil: Usually soluble with opalescence or turbidity.

Propylene Glycol: Usually soluble with opalescence.

Containers

Should be shipped preferably in glass, tin-lined, or aluminum containers. Good quality galvanized containers are suitable when long storage is not contemplated.

Storage

Store preferably in well-stoppered, full containers, in a cool place protected from light.

Specifications and Standards for Oil Spike

Other General Names

Oil Lavender Spike.
Oil Lavender Spanish.
Oil Spanish Spike.
Oil Aspic.

Botanical Nomenclature

Lavandula latifolia, Vill. (*Lavandula Spica* D.C.), Family: LABIATAE.

Preparation

By steam distillation of the flowers.

Physical and Chemical Constants

Color and appearance: Oil Spike is a pale yellow to yellow liquid, having a camphoraceous, lavender-like odor.

Specific Gravity 15° C.: 0.900–0.915.

Optical Rotation: –5° to +5°.

Refractive Index 20° C.: 1.4630 to 1.4680.

Esters as Bornyl Acetate: 1.5 to 3.0%.

Proceed as directed for the determination of esters, page A, using approximately 10 grams of Oil Spike, accurately weighed. The number of CC of half normal alcoholic potassium hydroxide consumed in the saponification, multiplied by 0.0981, indicates the number of grams of esters calculated as Bornyl Acetate ($C_{15}H_{21}O_2$) in the oil taken for assay.

Total Alcohols as Borneol: 30–40%.

Proceed as directed for the determination of total alcohols, Page B, using approximately 2.5 grams of the acetylated oil, accurately weighed, for the subsequent saponification. Calculate the per cent of total alcohols as Borneol by the following formula:

Per cent of Total Borneol ($C_{15}H_{21}OH$) in the oil tested

$$A \times 7.712 \times \frac{N}{B - (A \times 0.021)} \times [1 - (E \times 0.0021)]$$

A is the result obtained by subtracting the number of CC of half normal sulphuric acid required in the titration from the number of CC of half normal alcoholic potassium hydroxide originally taken.

B is the weight of acetylated oil taken, and E is the per cent of esters calculated as Bornyl Acetate.

Solubility in Alcohol: Soluble in some dilution between 1 and 3 volumes of 70% alcohol, however, upon further dilution it frequently becomes hazy.

Descriptive Characteristics

Stability:

Alkali: Relatively stable to alkali, although some change takes place.

Acids: Fairly stable to weak acids.

Solubility:

Benzyl Benzoate: Soluble in all proportions.

Fixed Oils: Soluble in all proportions in most fixed oils.

Glycerine: Slightly soluble.

Mineral Oil: Usually forms cloudy solutions.

Propylene Glycol: Soluble in all proportions.

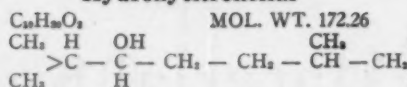
Containers

Should be shipped preferably in glass, tin-lined or aluminum containers. Good quality galvanized containers are suitable when long storage is not contemplated.

Storage

Store preferably in well stoppered full containers, in a cool place protected from light.

Hydroxycitronellal



(Various other structures are suggested)

Preparation

Obtained by the hydration of citronellal. The basic citronellal used may be from any source such as the optically active variety from Java Citronella or the optically inactive variety from Eucalyptus Citriodora.

Physical and Chemical Constants

Color and appearance: Viscous colorless liquid having a sweet odor of the lily type.

Specific Gravity @ 15°: 0.925 to 0.930.

Optical Rotation: Depends upon the optical activity of the raw material. When prepared from the Java type +9 to +10.5; when prepared from Eucalyptus Citriodora type +0.5 to –0.5.

Refractive Index @ 20°: 1.448–1.450.

Hydroxycitronellal Content: Not less than 95%. (See page D.)

Assay—Hydroxycitronellal determination:

Proceed as directed in the hydroxylamine method for aldehydes, see page 215, using approximately 1.3 gm. of sample, accurately weighed. The difference in the cc of N required for both

2

titrations multiplied by 0.0861 indicates the weight in grams of Hydroxycitronellal in the sample taken for assay.

Solubility in Alcohol: Soluble in 1½ and more volumes of 50% alcohol. Soluble in all proportions of 60% alcohol.

Bisulfite Test for non-aldehydic impurities: Add 9 cc of $NAH SO_3$ solution* to .5 cc Hydroxycitronellal. Shake vigorously for one minute. Clear solution should be obtained (terpenes). Solution should have no minty odor (isopulegol).

* (Bisulfite Solution—Prepare a fresh solution of 30% $NAH SO_3$ anhydrous by weight. To this add 4% of 10% $NA_2 CO_3$ solution to cut down free SO_3 . Solution to be filtered clear before use if necessary.)

Descriptive Characteristics

Stability:

Acids: Easily resinified by acids.

Alkali: Easily resinified by strong alkali.

Oxidation: Very readily oxidized by exposure to air.

Solubility:

Benzyl Benzoate: Soluble in all proportions.

Diethyl Phthalate: Soluble in all proportions.

Fixed Oils: Soluble in all proportions in most fixed oils.

Glycerine: Slightly soluble.

Mineral Oil: Slightly soluble.

Propylene glycol: Soluble in all proportions.

Water: Slightly soluble (approximately 5%).

Containers

Should be shipped preferably in glass, tin-lined or aluminum containers. Galvanized containers not recommended.

Storage

Store preferably in well-stoppered, full containers in a cool place protected from light.

Determination of Esters

Place the quantity of sample mentioned in each separate monograph, in a tared, 125-cc, Erlenmeyer flask, and weigh it accurately. Add 25-cc of half-normal alcoholic potassium hydroxide, connect the flask with a reflux condenser, and boil the mixture on a water bath for exactly one (1) hour, unless otherwise specified. Allow the mixture to cool, and titrate the excess of alkali with half normal sulphuric acid, using 10 drops of phenolphthalein T.S. as the indicator. Calculate as prescribed in each individual monograph.

Determination of Total Alcohols

Place 10-cc of the sample in an acetylation flask of 100-cc capacity and add 10-cc of acetic anhydride and 1 Gm. of anhydrous sodium acetate. Boil the mixture gently for exactly one (1) hour, cool, disconnect the flask from the condenser, transfer the mixture to a small separator, rinsing the acetylation flask with three successive, 5-cc portions of warm distilled water, and add the rinsings to the separator. When the liquids have completely separated, reject the aqueous layer, and wash the remaining oil with successive portions of sodium carbonate T.S., diluted with an equal volume of distilled water, until the last washing is alkaline to two (2) drops of phenolphthalein T.S.

Dry the resulting oil with anhydrous sodium sulfate and filter. Transfer the quantity of the dry acetylated oil mentioned in each separate monograph, to a tared, 100-cc, Erlenmeyer flask, note its exact weight, add 25-cc of half-normal alcoholic potassium hydroxide, connect the flask with a reflux condenser, and boil the mixture on a water bath for exactly one (1) hour.

Allow the mixture to cool, and titrate the excess of alkali with half-normal sulphuric acid using 10 drops of phenolphthalein T.S. as the indicator. Calculate the per cent of the total alcohols as outlined in each individual monograph.

Determination of Linalool

Dimethyl Aniline—Acetyl Chloride Method

10-cc of linalool or essential oil containing linalool, previously dried with sodium sulfate, is introduced into a 125-cc g.s. Erlenmeyer flask cooled with ice and water. To the cooled oil is added 20-cc dimethyl aniline (mono-methyl free) and the contents thoroughly mixed, then 8-cc acetyl chloride (reagent grade) and 5-cc of acetic anhydride are added, the anhydride serving as a solvent to prevent crystallization of the reaction mass. The

mixture is cooled for a few minutes and permitted to stand at room temperature for $\frac{1}{4}$ hour after which time the flask is immersed in a water bath maintained at $40^{\circ}\text{C} \pm 1^{\circ}$ for three hours. At the end of this time the acetylated oil is washed three times with 75-cc of ice water, then with successive washes of 25-cc of 5% sulfuric acid until the separated acid layer fails to liberate any dimethyl aniline with an excess of caustic. After removal of the dimethyl aniline, the acetylated oil is washed with 10-cc of 10% sodium carbonate solution and then finally washed neutral with water.

The oil is separated, dried over anhydrous sodium sulfate and the ester value determined in the usual manner. The linalool content can thus be obtained directly from saponification tables or by substitution in the following formula:

$$\% \text{ Linalool} = \frac{\text{cc N/2 KOH} \times 154.14}{20 (\text{wt. sample} - \text{cc N/2 KOH} \times 0.021)}$$

As this test is further to be used for other oils containing Linalool, besides Linalool itself, a correction factor is necessary with oils containing significant amount of esters. For such oils, the following standard formula is recommended:

$$\% \text{ Total Linalool} = A \times 77.07 \times (1 - (E \times .0021))$$

$$B - (A \times 0.021)$$

where A = cc half-normal alkali required for saponification.

where B = weight of sample.

where E = per cent of esters calculated as linalyl acetate in the original oil.

The test is not applicable to all tertiary alcohols, but only to linalool and linalool containing oils.

Hydroxylamine Method for Aldehydes and Ketones

Preparation of Hydroxylamine solution: Triturate 0.1 Gm. of bromophenol blue with 3-cc of twentieth-normal sodium hydroxide. When solution is complete, dilute to 25-cc with distilled water. Dissolve 20 Gm. of hydroxylamine hydrochloride in 40-cc of distilled water, dilute to 400-cc with alcohol, add with stirring 300-cc of half-normal alcoholic potassium hydroxide and 2.5-cc of the bromophenol blue solution, and filter the mixture.

ASSAY METHOD: Add 75-cc of Hydroxylamine solution prepared as above to W gm. (see Note 1.) (accurately weighed of substance to be tested) and mix thoroughly.

For Aldehydes: Allow to stand at room temperature for 15 minutes.

For Ketones: Reflux gently for one hour using a water condenser or an air condenser at least 30 inches long. Cool to room temperature. (See Note 2.)

Titrate to the greenish-yellow end point of Bromophenol Blue using one-half normal hydrochloric acid. Perform a blank determination using 75-cc of the hydroxylamine solution. Subtract the number of cc of half-normal hydrochloric

acid used in the titration of the sample from the number of cc used in the blank.

$$N \times .05 M$$

$$\% \text{ Aldehyde or Ketone} = \frac{N \times .05 M}{W}$$

where N is difference in cc of 0.5 N HCL between blank and sample obtained above.

M is molecular weight of aldehyde or ketone in terms of which results are to be calculated.

W is weight of sample used.

Note 1: The weight of sample W should be such that the cc of Hydrochloric Acid required for the titration of the flask containing the sample is slightly more than half the cc required to titrate the blank. This weight W will be given under each individual monograph, based on the use of relatively fresh hydroxylamine solution which will give a blank titration of over 30-cc of one-half normal Hydrochloric Acid. The solution has a tendency to lose strength on standing more than about 10 days.

Note 2: Some aldehydes or ketones have been found to require longer standing or heating. In such cases the change will be noted under the individual monograph.

Note 3: The value of the factor .05 M in the above formula for calculation of percentage is given under the individual monographs.

Specifications and Standards For OIL LEMONGRASS

Other General Names:

There are basically two types of Lemongrass Oil commercially available: the East Indian and "West Indian" type oil.

The East Indian Oil is also known as Cochin, Native and British Indian Lemongrass Oil.

The "West Indian" type oil appears on the market designated according to geographic origin as Madagascar, Guatemala, Honduras or Florida Lemongrass Oil, etc.

Botanical Nomenclature:

East Indian Oil: *Cymbopogon flexuosus* (Stapf). *Andropogon nardus* var. *flexuosus* (Hack.).

"West Indian" type Oil: *Cymbopogon citratus* (Stapf). *Andropogon nardus* var. *ceriferus* (Hack.).

Preparation:

By steam distillation of the freshly cut and partially dried grasses.

Physical & Chemical Constants:

East Indian Oil:

Color and Appearance: The East Indian Oil is generally dark yellow to light brown-red in color and has a pronounced heavy lemon-like odor.

Specific Gravity $15^{\circ}/15^{\circ}\text{C}$. 0.900-0.910.

Optical Rotation -3° to $+1^{\circ}$.

Refractive Index @ 20°C . 1.4830-1.4890.

Citral Content:

A. Acid Sulfite Method—Not less than 75%.

Solubility—Solubility in 2 to 3 volumes of 70% alcohol, often with slight turbidity.

"West Indian" Type Oil:

Color and Appearance: The "West Indian" type Oil varies from light yellow to light brown or orange. Its odor is lemon-like but of lighter character than the East Indian.

Specific Gravity $15^{\circ}/15^{\circ}\text{C}$. 0.875-0.900.

Optical Rotation -3° to $+1^{\circ}$.

Refractive Index @ 20°C . 1.4830-1.4890.

Citral Content:

A. Acid Method—Not less than 75%.

Solubility—Yields cloudy solutions in 70, 80, 90 and 95% alcohol.

Assay

A. Acid Sulfite Method: Introduce 10cc of Lemongrass Oil into a 100cc. Cassia flask and add 75cc. of a 30% solution of sodium metabisulfite. Heat the mixture in a water bath to 85° and shake the flask intermittently for one-half to one hour. Then add sufficient bisulfite solution to raise the meniscus within the graduated portion of the flask. On cooling, the volume of insoluble oil expressed in per cent subtracted from 100 represents the citral content.

Descriptive Characteristics

Stability:

Alkali: Lemongrass oils slowly decompose in the presence of alkalis.

Acids: Strong inorganic acids tend to polymerize the oil. Weak organic acids have less effect.

Solubility:

Propylene Glycol: The East Indian oil is soluble in all proportions of propylene glycol with slight turbidity or cloudiness.

The "West Indian" type oil has limited solubility in propylene glycol (about 10% accompanied by cloudiness).

Mineral Oil: Soluble with cloudiness or turbidity.

Fixed Oils: Soluble in most fixed oils.

Benzyl Benzoate: Soluble in all proportions, generally with slight turbidity.

Diethyl Phthalate: Soluble in all proportions with slight turbidity.

Glycerine: Slightly soluble.

Containers

Should be shipped preferably in glass, aluminum or tin-lined containers. Good quality galvanized containers are suitable, provided long storage is not contemplated.

Storage

Store in full containers and avoid exposure to light and excessive heat.

Specifications and Standards For

TERPINYL ACETATE

$C_{16}H_{22}O_2$ Mol. Wt.: 196.28

Preparation

Acetylation of terpineol.

Physical & Chemical Constants

Color and appearance: Colorless liquid having an odor suggestive of bergamot and lavender.

Specific gravity at 15° C.: 0.958 to 0.968.

Optical rotation: between $-0^{\circ}30'$ and $+0^{\circ}30'$.

Refractive index @ 20° C.: 1.4640 to 1.4660.

Ester Content: 97-100% (calculated as terpinyl acetate).

Method: Proceed as directed for the determination of esters, Page A, using approximately 1.0 g of sample accurately weighed. Reflux the mixture on a water bath for exactly two hours. The number of cc. of half normal potassium hydroxide consumed in the saponification, multiplied by 0.0981 indicates the number of grams of ester calculated as Terpinyl Acetate in the sample taken for assay.

Solubility in alcohol: Soluble in 5 or more volumes of 70% alcohol.

Descriptive Characteristics

Solubility:

Fixed Oils: soluble in all proportions. Diethyl Phthalate: soluble in all proportions.

Benzyl Benzoate: soluble in all proportions.

Mineral Oil: soluble in all proportions.

Water: slightly soluble, approx. 0.1%.

Glycerin: slightly soluble, approx. 0.1%.

Stability:

Acids: Not very stable; strong acids transform terpinyl acetate into terpenic products.

Alkali: Stable in neutral and weak alkaline media; strong alkalis saponify the ester.

Oxidation: Stable.

Containers

Terpinyl acetate should be shipped in glass, tin, aluminum, galvanized iron.

Specifications and Standards For TERPINEOL

$C_{15}H_{26}O$ Mol. Wt.: 154.24

Formula: Mixture of Isomers

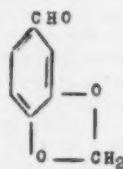
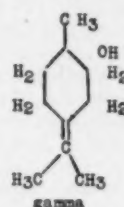
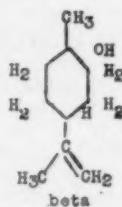
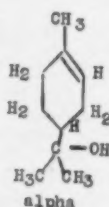
Preparation

Obtained from terpin hydrate by splitting off the elements of water by chemical means.

Physical & Chemical Constants

Color and appearance: Colorless liquid, viscous at room temperature, having an odor of the lilac type.

Specific gravity @ 15° C: 0.936 to 0.941.



Optical rotation: between $-0^{\circ}10'$ and $+0^{\circ}10'$.

Congealing temperature: all products should crystallize when seeded at $+2^{\circ}$ C. Boiling range: 214° - 224° C.; 90% within 5° C.

Refractive index @ 20° C.: 1.4825-1.4850.

Solubility in alcohol: soluble in 2 and more volumes of 70% alcohol; 4 and more volumes of 60% alcohol, 8 and more volumes of 50% alcohol.

Descriptive Characteristics

Solubility:

Diethyl Phthalate: soluble in all proportions.

Benzyl Benzoate: soluble in all proportions.

Mineral Oil: soluble in all proportions. Water: slightly soluble; approx. 0.5%.

Water in Terpineol: slightly soluble; approx. 5%.

Glycerin: slightly soluble; approx. 0.5%.

Stability:

Acids: not stable; terpineol transformed into terpenic products.

Alkali: stable in neutral and moderately alkaline media.

Oxidation: relatively stable.

Containers

Terpineol should preferably be shipped in glass, tin, aluminum, galvanized iron, clean black iron.

Specifications and Standards For HELIOTROPINE

$C_{15}H_{24}O_2$ Mol. Wt.: 150.13

Heliotropine, piperonal, piperonyl aldehyde, protocatechuic aldehyde methylene ether, 3-4 methylene dioxy benzaldehyde.

Grades: Perfumery grade.

Preparation

Oxidation of iso safrol.

Uses: Heliotropine is widely used in soap perfumery. Aids in the making of carnation, violet, lilac, sweet pea and muguet types. An indispensable base for all heliotrope perfumes and bouquets.

Physical & Chemical Constants

Color and appearance: Fine, white, lustrous crystals.

Odor: A sweet, fine, flowery note re-

sembling heliotrope, free of safrol by-odors.

Congealing Point 35° C. minimum.

Melting Point: 35.5° - 37° C.

Aldehyde content: 99.0% minimum calculated as Heliotropine.

Assay

Heliotropine Determinations

Proceed as directed on Page D, using approximately 1.5 gram sample, accurately weighed. Reflux gently for one-half hour. The difference in the cc. of N/2 HCl required for both titrations multiplied by 0.0751 indicates the weight in grams of Heliotropine taken for assay.

Descriptive Characteristics

Stability:

When stored at temperatures approximating its melting point, the product tends to fuse and discolor.

Acids: Stable to dilute acids at ordinary temperatures.

Alkali: Stable to dilute alkali at ordinary temperatures.

Oxidation: Relatively resistant to oxidations; oxidizes very slowly to piperonylic acid.

Solubility

Alcohol: soluble in 3 to 4 cc. of 70% alcohol.

Benzyl Benzoate: V.S.

Diethyl Phthalate: V.S.

Fixed Oils: F.S. in most fixed oils.

Glycerine: Insol. (less than 1 part per 100).

Mineral Oil (Carnation white): Sp. Sol.

Propylene Glycol: F.S.

Volatile Oils: F.S. to S. in most volatile oils.

Water: Insol. (less than 1 part per 100).

The figures given are at 25° C. unless otherwise noted. Relative cc. of solvent for 1 gram of Heliotropine.

Very soluble (V.S.): less than 1 cc. of solvent.

Free soluble (F.S.): from 1 to 10 parts of solvent.

Soluble (S): from 10 to 30 parts of solvent.

Sparingly soluble (Sp. Sol.) from 30 to 100 parts of solvent.

Containers

1 oz. to 200 lbs., usually packed in fibre-board or pressboard containers and wooden barrels.

Storage

Preserve Heliotropine in a cool, dry place protected from light.

Specifications and Standards for Copaiba Oil

Other General Names

Copaiva oil.
Copaiva Balsam oil.

Preparation

Obtained by distillation of Copaiba Balsam.

Physical and Chemical Constants

The oil is colorless, yellowish liquid having the characteristic odor of Balsam Copaiba and an aromatic, slightly bitter and pungent taste.

Specific Gravity @ 15° C.: 0.886 to 0.912.

Optical Rotation: -2° to -33°.

Refractive Index @ 20° C.: 1.4930 to 1.5000.

Gurjun Oil Test:

Add 5 to 6 drops of sample to 10 cc glacial acetic acid containing 5 drops of nitric acid. When gurjun oil is present a purple violet color develops within two (2) minutes.

Descriptive Characteristics

Stability:

Alkali: Fairly stable.
Acid: Fairly stable.

Solubility:

Benzyl Benzoate: Soluble in all proportions.

Mineral Oil: Soluble in all proportions.
Fixed Oils: Soluble in all proportions.
Diethyl Phthalate: Soluble in all proportions.

Propylene Glycol: Practically insoluble.
Glycerine: Insoluble.

Alcohol: Usually soluble in an equal volume of absolute alcohol, but requires from 5 to 10 volumes of 95% alcohol for complete solution.

Containers

Should be shipped preferably in glass, tin-lined or aluminum containers. Good quality galvanized containers are suitable when long storage is not contemplated.

Storage

Store preferably in tight, full containers in a cool place protected from light.

Specifications and Standards for Oil Citronella Ceylon

Botanical Nomenclature

Andropogon Nardus Ceylon, de Jong.
Cymbopogon Nardus Rendle, lena batu.
Family: Gramineae.

Preparation

Direct steam distillation of the dried grass.

Physical and Chemical Constants

Color and appearance—Yellow to yellowish brown liquid.

Specific Gravity @ 15° C.: -0.898 to 0.910.

Optical Rotation: -9° to -18°.

Refractive Index @ 20° C.: -1.4790 to 1.4850.

Solubility in Alcohol—Clearly soluble at some dilution between 1 and 2 volumes of 80% alcohol. When diluted to 10 volumes, the solution should remain clear or become not more than slightly opalescent with no separation of oil after standing overnight.

Mineral Oil (saturated hydrocarbons) —Negative.

Place 20 cc of fuming sulphuric acid, containing 15% free SO₃ in a graduated, narrow neck Babcock bottle, 50 cc capacity, cool in ice bath 10 minutes, keep bottle in ice bath and add 5 cc of Oil Citronella Ceylon dropwise at such a rate that the bottle remains cold. Incline the bottle and rotate continuously during the addition, which should require about 5 minutes. When no further reaction is apparent remove from ice bath, bringing slowly to room temperature with frequent cautious shaking. Wash down neck with 3 or 4 cc of fuming sulphuric acid.

When no further reaction is apparent on shaking, shake vigorously for 30 seconds. Place bottle in water bath and heat slowly to 60° C. with frequent agitation. (Caution is required, as escaping gas may force some solution from bottle.) Heat at 60°-65° C. for 15 minutes, shaking the contents carefully but vigorously 8-10 times during this period. Remove from bath and without cooling, carefully add sulphuric acid (Specific gravity about 1.84) until the bottle is about three-fourths full. Shake well. No material should adhere to stem and sides at this point; cool to room temperature, add sulphuric acid (Specific gravity about 1.84) until the level is about two-thirds up in neck of flask. Centrifuge 10 minutes at 1,200 revolutions per minute or stand over night and read, centrifuge an additional 10 minutes. Pure Oil Citronella Ceylon should have no readable separation.

Aldehyde Content

7% to 15% calculated as Citronellal.

Proceed as directed in the hydroxylamine method for aldehydes (see Determinations E.O.A. No. 1D), using approximately 5 grams of the oil, accurately weighed. The difference in the cc of N/2 HCL required for both titrations, multiplied by 0.07712, indicates the weight in grams of Citronellal in the sample taken for assay.

Total Alcohols

55% to 65% (calculated as Geraniol).

Proceed as directed for the determination of total alcohols (see Determinations E.O.A. No. 1B). Observe the following modifications: 1. Use two (2) grams of anhydrous sodium acetate; 2. Immerse the acetylation flask in an oil bath to the level of the liquid in the flask; continue the acetylation for two (2) hours, keeping the bath between 155°-160° C.

Use approximately two (2) grams of

the dried acetylated oil, accurately weighed, for the subsequent saponification. Calculate the per cent of Geraniol by the following formula:

Per cent of total alcohols, calculated as Geraniol, in the oil tested =
$$A \times 7.712$$

$$B - (A \times 0.021)$$

A is the result obtained by subtracting the number of cc of half normal hydrochloric acid required in the titration from the number of cc of half normal alcoholic potassium hydroxide originally taken. B is the weight of acetylated oil taken.

Descriptive Characteristics

Stability:

Alkali: Relatively unstable in the presence of alkali.

Acids: Unstable, esterification takes place in the presence of some organic acids. Many strong inorganic acids cause decomposition.

Solubility:

Benzyl Benzoate: Soluble in all proportions.

Fixed Oil: Soluble in all proportions in most fixed oils.

Glycerine: Practically insoluble.
Mineral Oil: Usually forms cloudy solutions.

Propylene Glycol: Soluble usually with opalescence or turbidity.

Containers

Should be shipped preferably in glass, tin-lined or aluminum containers. Good quality galvanized or clean black iron containers are suitable when long storage is not contemplated.

Storage

Store preferably in tight, full containers in a cool place protected from light.

Specifications and Standards for Citronella Oil—Java Type

Other General Names

The oil of commerce is generally characterized by the geographic origin, e.g., Java, Guatemala, Formosa, etc., and differs from the Ceylon oil in both composition and odor.

Botanical Nomenclature

Andropogon Nardus (L), Cymbopogon Nardus (Rendle).

Family: Gramineae.

The grass used for production of the Java type oil is referred to as the "maha pengri" type, as distinguished from the "lena batu," which is used for the production of the Ceylon type oil.

Preparation

By direct steam distillation of the freshly cut or partially dried grasses.

Physical and Chemical Constants

Color and appearance—The Java type Citronella Oil is characterized by a light yellow to tan color, low viscosity, and pronounced aldehydic odor.

Specific Gravity 15°/15° C.: 0.883 to 0.900.

Optical Rotation: -0° 30' to -6°.

Refractive Index @ 20° C.: 1.4660 to 1.4745.

Total Aldehydes as Citronellal: 30% to 45%.

The aldehyde content of individual drums may show a wide variation; however, bulk shipments are generally required to meet an average minimum citronellal content of 35%.

Total Alcohols as Geraniol: 85% to 97%.

Solubility:

Clearly soluble at all dilutions between 1 and 2 volumes of 80% alcohol and may become opalescent on further dilution.

Assay:

Total Aldehydes as Citronellal:

Proceed as directed in the hydroxylamine method for aldehydes (see Determinations E.O.A. No. 1D), using approximately 2.5 grams of sample, accurately weighed. The difference in the cc of N/2 HCl required for both titrations multiplied by 0.07712 indicates the weight in grams of total aldehydes calculated as citronellal in the sample taken.

Assay:

Total Alcohols as Geraniol:

Proceed as directed for the determination of total alcohols (see Determination E.O.A. No. 1B), with the following modifications:

1. Use 2 grams of anhydrous sodium acetate for acetylation.

2. Reflux the resulting acetylation mixture for two hours.

Calculate the percentage of total alcohols as geraniol, employing the following formula:

$$\% \text{ Total Alcohols} = \frac{A \times 7.712}{B - (A \times 0.021)}$$

A is the result obtained by subtracting the number of cc of half normal hydrochloric acid required in the titration from the number of cc of half normal alcoholic potassium hydroxide originally taken.

B is the weight of acetylated oil taken.

Descriptive Characteristics

Stability:

Alkali: Moderately stable to weak alkali at normal temperatures. Unstable in the presence of concentrated alkali at elevated temperatures.

Acids: Decomposes in the presence of mineral acids. Moderately stable to weak organic acids.

Solubility:

Soluble in all proportions with Benzyl Benzoate, Diethyl Phthalate and most fixed oils.

Soluble with cloudiness in mineral oil and Propylene Glycol.

Insoluble in Glycerine.

Containers

Should be shipped preferably in glass, tin-lined or aluminum containers. Good quality galvanized or black iron containers are suitable provided long storage is not contemplated.

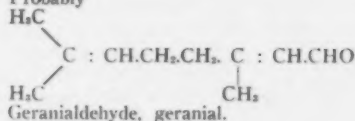
Storage

Store in tight, full containers in a cool place protected from light.

Specifications and Standards for Citral Pure



Probably



Mol. Wt. 152.12

Preparation

Obtained by reaction with Sodium Sulphite or Bisulphite with further purification by distillation and chemical processes, or can also be prepared by the oxidation of the alcohols such as geraniol, nerol and linalool by means of chromic acid or other oxidizing substances.

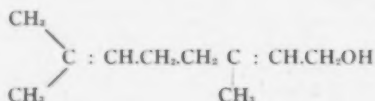
Physical and Chemical Constants

Color and appearance—A mobile, pale yellow liquid having a strong lemon odor.

Specific Gravity @ 15° C.: 0.891 to 0.897.

Optical Rotation: Inactive.

Refractive Index @ 20° C.: 1.4860 to 1.4900.



Solubility: Soluble in 7 volumes of 60% alcohol.

Sodium Bisulphite Solubility Test

Introduce 5 cc of Citral into a 100 cc Cassia Flask and add 5 cc of a 30% solution of freshly prepared Sodium Bisulphite. Shake the cassia flask in a water bath for 2 minutes, then add 50 cc of additional bisulphite solution and shake flask in the water bath until completely reacted, which is indicated by an apparently clear solution. Then add enough hot distilled water to raise the meniscus within the graduated portion of the flask. No oil separates when the solution is cooled.

Citral Content

Not less than 97%.

Method: Proceed as directed in the hydroxylamine method for aldehydes (See Determinations E.O.A. 1D), using approximately 1 gram of sample, accurately weighed. The difference in the cc of N — HCL required for both titrations multiplied by 0.07611 indicates the weight in grams of Citral in the sample taken for assay.

Solubility

Benzyl Benzoate: All proportions.

Diethyl Phthalate: All proportions.

Fixed Oils: All proportions.

Glycerine: Insoluble.

Mineral Oil: All proportions.

Propylene Glycol: All proportions.

Stability

Alkali: Not stable.

Acids: Not stable.

Containers

Citral should preferably be shipped in glass. Good grade tins may be used if long storage is not contemplated.

Storage

Store preferably in tight full containers in a cool place protected from light.

Specifications and Standards for Geraniol

Mol. Wt. 154.24

Preparation

Obtained from such essential oils as Citronella Java and Palmarosa Oil, and other essential oils.

Physical and Chemical Constants

Color and Appearance—Colorless liquid, having a rose-like odor.

Specific Gravity 15° C.: .870 to .890.

Optical Rotation: —2° to +2°.

Refractive Index @ 20° C.: 1.4710 to 1.4780.

Solubility in Alcohol—Soluble in two and more volumes of 70% alcohol.

Total Alcohol Content—Not less than 88% calculated as $C_{10}H_{18}OH$.

Method: Proceed as directed for the determination of total alcohols (See Determinations E.O.A. 1B), using approximately 1.2 gms of acetylated oil, accurately weighed for the saponification. Calculate the percentage of total alcohols as geraniol, using the following formula:

$$\text{Total Alcohols} = \frac{A \times 7.712}{B - (A \times .021)}$$

"A" is the result obtained by subtracting the number of cc of half normal hydrochloric acid required in the titration from the number of cc of half normal alcoholic potassium hydroxide originally taken.

"B" is the weight of acetylated oil.

Ester Content—Not more than 1% calculated as Geranyl Acetate.

Method: Proceed as directed for the de-

termination of esters (See Determinations E.O.A. 1A), using approximately 5 gms. of sample accurately weighed. The number of cc of half normal alcoholic potassium hydroxide consumed in the saponification, multiplied by .0981 indicates the gms. of ester calculated as geranyl acetate.

Aldehyde Content—Not more than 1% calculated as Citronellal.

Method: Proceed as directed in the Hydroxylamine Method for aldehydes (See Determinations E.O.A. 1D), using approximately 5 gms. of sample accurately weighed and allow the test to stand for 15 minutes at room temperature. The difference in the number of cc required for the titration of the blank and the sample multiplied by .07712 indicates the number of grams of aldehyde calculated as citronellal.

Descriptive Characteristics

Solubility:

Diethyl Phthalate: Soluble in all proportions.

Benzyl Benzoate: Soluble in all proportions.

Mineral Oil: Soluble in all proportions.

Fixed Oils: Soluble in all proportions.

Glycerine: Insoluble.

Propylene Glycol: Soluble in all proportions.

Stability:

Acids: Not stable.

Alkali: Fairly stable at moderate temperatures.

Containers

Should be shipped preferably in glass or tin-lined containers. Good quality galvanized containers are suitable provided long storage is not contemplated.

Storage

Store in tight, full containers in a cool place, protected from light.

Specifications and Standards for Geranyl Acetate

$C_{15}H_{22}O_2$ Mol. Wt. 196.28

Preparation

Obtained from Geraniol by acetylation.

Physical and Chemical Constants

Color and Appearance—Colorless liquid having a pleasant flowery odor.

Specific Gravity @ 15° C.: 0.907 to 0.918.

Optical Rotation: -2° to $+2^\circ$.

Refractive Index @ 20° C.: 1.4580 to 1.4640.

Ester Content: Not less than 90%.

Proceed as directed for the determination of esters (See E.O.A. 1A), using approximately 1.0 gram of sample accurately weighed. The number of cc of half normal potassium hydroxide solution consumed in the saponification, multiplied by 0.0981, indicates the number of grams of ester calculated as Geranyl Acetate in the sample taken for assay.

Solubility in Alcohol—Soluble in 8 volumes of 70% alcohol.

Descriptive Characteristics

Solubility:

Benzyl Benzoate: Soluble in all proportions.

Diethyl Phthalate: Soluble in all proportions.

Fixed Oils: Soluble in all proportions.

Glycerine: Insoluble.

Mineral Oil: Soluble in all proportions.

Propylene Glycol: Not completely soluble in all proportions.

Stability:

Acids: Fairly stable to weak organic acids.

Alkali: Unstable to alkalis, due to saponification of the ester with subsequent liberation of free geraniol.

Containers

Geranyl Acetate should be shipped in glass, aluminum, tin-lined or good quality galvanized iron containers.

Storage

Store preferably in tight, full containers in a cool place, protected from light.

Specifications and Standards for Citronellol

Preparation

Reduction of citronellal or geraniol or obtained from essential oils such as geranium and citronella, etc.

Physical and Chemical Constants

Color and Appearance—Colorless liquid having a roselike odor.

Specific Gravity 15° C.: .849 to .868.

Optical Rotation: -3° to $+3^\circ$.

Refractive Index @ 20° C.: 1.4460 to 1.4600.

Solubility in Alcohol—Soluble in two and more volumes of 70% alcohol.

Total Alcohol Content—Not less than 90% calculated as $C_{10}H_{18}OH$.

Method: Proceed as directed for the determination of total alcohols (See Determinations E.O.A. 1B), using approximately 1.2 gms. of the acetylated oil accurately weighed for the saponification. Calculate the percentage of total alcohols as citronellol, using the following formula:

$$A \times 7.813$$

$$\text{Total Alcohols} = \frac{B - (A \times .021)}{B}$$

"A" is the result obtained by subtracting the number of cc of half normal hydrochloric acid required in the titration from the number of cc of half normal alcoholic potassium hydroxide originally taken.

"B" is the weight of acetylated oil.

Ester Content—Not more than 1% calculated as citronellyl acetate.

Method: Proceed as directed for the determination of esters (See Determinations E.O.A. 1A), using approximately 5 gms. of sample accurately weighed. The number of cc of half normal alcoholic potassium hydroxide consumed in the saponification, multiplied by .0991, indicates the gms. of ester calculated as citronellyl acetate.

Aldehyde Content—Not more than 1% calculated as Citronellal.

Method: Proceed as directed in the Hydroxylamine Method for aldehydes (See Determinations E.O.A. 1D), using approximately 5 gms. of sample accurately weighed and allow the test to stand for 15 minutes at room temperature. The difference in the number of cc required for

the titration of the blank and the sample multiplied by .07712 indicates the number of gms. of aldehyde calculated as citronellal.

Descriptive Characteristics

Solubility:

Diethyl Phthalate: Soluble in all proportions.

Benzyl Benzoate: Soluble in all proportions.

Mineral Oil: Soluble in all proportions.

Fixed Oils: Soluble in all proportions.

Glycerine: Insoluble.

Propylene Glycol: Soluble in all proportions.

Stability:

Acids: Fairly stable to dilute acids.

Alkali: Fairly stable.

Containers

Should be shipped preferably in glass or tin-lined containers. Good quality galvanized or black iron containers are suitable provided long storage is not contemplated.

Storage

Store in tight, full containers in a cool place, protected from light.

DEFINITIONS . . .

(From Page 175)

treated in such a way that no growths can be produced from it by appropriate culture, then—and then only—has it been completely sterilized.

One of the best ways to accomplish sterilization is maintaining for a sufficient time at a temperature at which microorganisms cannot live; hence the use of the word *sterilize* suggests to some the destruction of microorganisms by heating. To others it includes also the notion of the use of strong chemical agents. The word calls to mind the treatment of surgeons' instruments, gauze bandages, culture dishes, and other apparatus rather than the treatment of the sick room or of the human body.

Disinfectant and Sterilize—It has been noted that *disinfectant* refers particularly to the destruction of disease germs (especially the vegetative forms), while *sterilize* denotes the freeing from all organic life. Hence *sterilize* is the more drastic of the two terms and it might easily happen that something is thoroughly disinfected without being completely sterilized. This is true, for example, of the customary treatment of milk cans, milk bottles, etc., in the dairy industry, where treatment sufficient to prevent diseases and spoiling of the milk is not necessarily sterilization.

DEODORANT, -RIZER

Definition—

deodorant, deodorizer, n. Anything that destroys or masks offensive odors.

Comments—A deodorant may or may not be an antiseptic or disinfectant. The popular notion that danger from infection disappears with the removal of disagreeable odor is of course a mistaken one.

INSECTICIDE, -DAL

Definitions—

insecticide, n. A substance that destroys

insects, especially a preparation used for this purpose.

insecticidal, *adj.* Of or pertaining to insecticides; destroying insects.

Comments—As defined, the word *insecticide* is limited to the destruction of insects. The Insecticide Act of 1910 defines it somewhat more broadly, however, as "any substance or mixture of substances intended to be used for preventing, destroying, repelling, or mitigating any insects." Also, the Food and Drug Administration admits within the term *insect* small invertebrate animals such as spiders and mites which do not belong to the order *Insecta* but are liable to be called insects in popular language. Insecticides may be effective against one type of insect but not necessarily against all types of insects. Insecticides usually act as stomachic or respiratory poisons; their method of application or use varies with the type of the insecticide and of the insect against which it is applied. An insecticide although usually used to destroy insects does not necessarily give a 100 per cent kill.

DISINFEST

Definition—

disinfest, *v.t.* To rid of infestation; to free from infesting insects, rodents or other small animals.

Comments—The earliest appearance of the word of which the committee has record is in the report of the Committee on Standard Regulations for the Control of Communicable Diseases, A. P. H. A., 1926, in which the following definition appears: "By disinfesting is meant any process, such as the use of dry or moist heat, gaseous agents, poisoned food, trapping, etc., by which insects and animals known to be capable of conveying or transmitting infection may be destroyed."

Since a word covering the above process was apparently needed, and since the inclusion of this sense in the meaning of *disinfest* (as has been the practice of some) seems incorrect and undesirable, the introduction and use of the comparatively new word *disinfest* are to be commended.

PROPHYLACTIC

Definitions—

prophylactic, *n.* Anything that prevents, or that contributes to the prevention of, disease; a preventive.

prophylactic, *adj.* Guarding from disease; preventing, or contributing to the prevention of, disease.

Comments—The meaning of *prophylactic* is wide. It applies to anything which even helps to ward off disease, as fresh air, nutritious diet, and rest, which serve as preventives of tuberculosis and other ailments. One writer has even used the term "mental prophylactics." Various medicinal preparations are also called *prophylactics*. It would seem however that a substance, to be called a *prophylactic*

against a given disease should be demonstrated to have some efficacy for the purpose in question under the conditions of its intended use.

CONCLUSIONS

It has been announced as a principle of legal practice that "language used in the label is to be given the meaning ordinarily conveyed by it to those to whom it is addressed." This commends itself as a sound and wise ruling, for the general public cannot be expected to be acquainted with special technical meanings or to have information proper to experts alone. Nevertheless, it is possible to draw wrong conclusions from this principle. People constantly make use of words of which they do not know the accurate meaning. They know barely enough about it for ordinary purposes; the rest they leave to the specialist. This is eminently true of such things as drugs and medicaments. It is small wonder that similar terms are sometimes confused in the popular mind.

It may of course happen in the development of language that a term becomes so confused that it undergoes a complete change of meaning and that the new meaning becomes commonly accepted. But the mere fact that the average person has a confused notion of a word which is used correctly by writers and careful speakers does not justify acceptance of the confused meaning.

The terms *antiseptic* and *disinfectant* may be taken as examples. There appears to be some haziness in the mind of the public regarding their signification; yet the greater part of the literature is in fair agreement as to the derivation, history, and present meaning of the two words. Moreover, what popular confusion may exist is not so much with respect to the *root idea* of the words ("antiseptic," opposing decomposition; "disinfectant," ridding of infection) as regarding the mechanism by which the result is effected (removing germs, killing germs, or preventing the growth of germs). It is the result that chiefly concerns the public; the expert must be relied on for exact knowledge of the mechanism.

So far as the writer can determine after talking with various persons, bacteriologists, physicians, druggists, manufacturers of chemicals, and government officials, there do not seem to be serious differences of opinion among professional men as to the meanings of the various terms now under discussion.

In so far as differences exist, they seem to relate rather to the question as to what is a fair use of the terms in connection with certain manufactured products, when the circumstances under which these products are to be used are duly considered. For example, there seems to be pretty general agreement that the term *antiseptic* (at least aside from surgery) may properly be applied to a substance which merely arrests the growth of microorganisms without killing them. There is apparently no question, for example, as to advertising a bandage impregnated with iodoform as an antiseptic dressing for wounds or as to calling iodoform or any similar agent an antiseptic when so used. The question seems to be whether a substance which is not a germicide but which acts as an antiseptic so long as it remains in contact with the area to be protected can fairly be called an antiseptic when its application is necessarily brief as in the case of a mouth wash, gargle or tooth paste. Again, the agreement on the meaning of the term *prophylactic* seems to be good. It is recognized as a very broad term. Apparently the main question at issue, if there is one, is under what circumstances a given substance may fairly be claimed to have a prophylactic effect.

The adjustment of such questions as to what is fair under different circumstances seems to lie outside the province of defining meanings of words. It seems to be a matter of bacteriological and medical knowledge, a spirit of fair play, and good common sense. If the writer may hazard a suggestion, it would be that, since the correct application of certain terms of which *antiseptic* and *disinfectant* may serve as types depends on a number of factors (in the

(Turn to Page 230)

Floor Wax Specification

*Official Specification and Standard Test Method of The
National Assn. of Insecticide and Disinfectant Mfgs.*

A SPECIFICATION and standard method of testing for water emulsion floor waxes was adopted by the National Association of Insecticide & Disinfectant Manufacturers at a meeting in Cleveland, June, 1943. Specification and method follows:

SPECIFICATION FOR WATER-DISPERSION FLOOR WAX

Applicable to Waxes of from
10 to 15% Total Solids

A. General Requirements

1. The material shall be suitable for application to all sealed floors and floor coverings in general.

2. The material shall be a stable aqueous colloidal dispersion of waxes and other suitable substances. The composition and properties of the material shall be such that it will meet all of the provisions of the detailed requirements, when tested by the NAIDM test methods.

3. When applied in accordance with the manufacturer's direction, the material shall dry to a lustrous finish without polishing.

B. Detailed Requirements

1. **Sediment.** The material shall be a fluid dispersion containing not over 4 per cent sediment, the percentage being calculated on the basis of total solids.

2. **Stability.** The material shall show no gelling or creaming when kept in closed containers at 62° C. (125° F.) for 168 hours (7 days).

3. **Application.** The material is to be applied as a thin, uniform film to clean dry flooring surfaces.

4. **Color and Transparency.** A thin, dried film of the material, prepared by flowing onto a clear glass plate and drying in air at 25° C. (77° F.), shall be substantially transparent and practically colorless, as viewed by transmitted bright daylight.

5. **Leveling and Spreading.** The material, when applied as a thin, uniform film on new linoleum shall dry without streaking.

6. **Lustre or Gloss.** The dried film shall increase the gloss of new linoleum not less than 10 per cent, as measured by a light reflectance meter.

7. **Alkalinity.** The material shall not have a pH greater than 10.0 nor less than 4.0.

8. **Surface Tension.** The material shall have a surface tension not

greater than 33 dynes per centimeter at 25° C. (77° F.).

9. **Flexibility of Film.** The dried film shall be sufficiently flexible so that no cracking will occur when a 2 coat application, on new linoleum, dried 48 hours at 25° C. (77° F.) and 50 per cent relative humidity is bent, through 180° around a 2 inch diameter mandrel.

10. **Abrasion Resistance.** The dried film shall have an abrasion index (Taber cycles divided by weight of film in mgs. per sq. cm.) of not less than 100 when tested on glass plates using a Taber Abraser (Model J or equivalent) with Taber CS-10 Calibrase wheels.

11. **Tackiness and Slipperiness.** The dried film shall be neither soft and sticky nor excessively slippery.

12. **Water Resistance.** The dried film on a specified surface, after 48 hours at 25° C. (77° F.) and 50 per cent relative humidity shall be resistant to cold water. The film shall not be permanently whitened or damaged by contact with water for one hour at 25° C. (77° F.). The film shall not be removed by damp mopping with a soft rag using clear water at 25° C. (77° F.).

13. **Removal of Film.** A film dried for 48 hours at 25° C. (77° F.) and 50 per cent relative humidity, on new linoleum, shall be easily removable by moderate scrubbing with a soft bristle brush, using an aqueous detergent solution, containing 0.25 per cent tallow soap chips and 0.25 per cent aqua ammonia (28 per cent NH₃) at a temperature of 50° C. (122° F.).

N.A.I.D.M. PROPOSED STANDARD METHODS FOR TESTING WATER-DISPERSION FLOOR WAX

Purpose

The purpose of compiling a more or less complete set of methods for testing water-dispersion floor wax is to make available to the manufacturer, user or other interested persons suitable procedures which have proven to be best adapted for the purpose intended. It is the further purpose to limit the methods more or less to tests designed to evaluate performance properties rather than to determine composition data. There is a need for such standard methods because even on such a simple test as total solid content, there is a possibility of widely divergent results unless great attention is paid to small details. At present there are no methods accepted as standard by any association or group except as such methods may be part of a specification. Standard methods of testing will make

it possible to eliminate controversies which are now inevitable.

Methods of Testing

1. **Sediment.** Mix the original sample well and pour a 100 cc. portion into a graduated A.S.T.M. water and sediment tube. Centrifuge for 15 minutes at approximately 2,000 r.p.m. Read directly volume of sediment in mls.

2. **Stability.** Measure viscosity of original sample at 25° C. (77° F.) using Oswald type pipet viscosimeter. Pour 100 ml. of the original sample into a 4 oz. bottle approximately 35 mm. inside diameter. Close the bottle securely with a clean cork and allow it to stand undisturbed in an upright position at 52° C. (125° F.) for 168 hours. At the end of this time, cool to room temperature, measure viscosity as before and observe for any creaming, separation or gelling.

3. **Total Solids.** Use a porcelain capsule crucible approximately 5 cm. in diameter and 1 cm. deep for the determination. Heat the capsule to dull red heat, cool in a desiccator, and weigh to the nearest tenth of a milligram. Place in the capsule a sample of from 2 to 3 grams accurately weighed to the nearest milligram, taking suitable precautions to avoid error due to loss of weight by evaporation during transfer and weighing of the sample. Heat the capsule containing the sample on a steam bath for 1 hour, then transfer it to a drying oven and heat for 3 hours at 105° to 110° C. (221° to 230° F.). Cool the capsule in a desiccator and weigh to the nearest tenth of a milligram. Multiply the weight of non-volatile matter by 100 and divide by the weight of the sample to obtain the percentage of non-volatile matter.

4. **pH Value.** Determine the pH of the sample at 25° C. (77° F.) using a glass electrode pH meter without application of correction for sodium or potassium ion concentration.

5. **Surface Tension.** The surface tension of the sample at 25° C. (77° F.) may be determined by one of the reliable, established methods for this determination. The ring detachment method is preferred for this test on water-dispersion waxes. Instruments suitable for determination of the surface tension of water-dispersion floor waxes include the Cenco-du Nouy Tensiometers described in Bulletin 101 of the Central Scientific Company.

6. **Leveling and Spreading.** Test panels, 3 x 6 inches, of new brown linoleum of good quality and either ¼ or ½ inch in thickness shall be used. Before applying the water-dispersion wax to these test panels, thoroughly re-

move any wax coating. Usually this can be done by soaking for five minutes at 50° C. (122° F.) in an aqueous solution containing 0.25 per cent by weight of 88-92 per cent tallow chip soap and 0.25 per cent by weight of 28 per cent aqua ammonia, scrubbing the top surface of the test panels gently with a soft bristle brush or cloth saturated with the above detergent solution at 40°-50° C. (104°-122° F.), rinsing the test panels thoroughly with water at 40°-50° C., draining and wiping the top surface dry with soft clean cloths.

Apply some of the sample to one of the cleaned linoleum test panels, using a small, clean mohair applicator just saturated with the sample, and applying it with light, uniform, overlapping parallel strokes. Note leveling and spreading properties from appearance of dried film.

Place coated linoleum specimen in desiccator or chamber in which humidity is controlled at 50 per cent relative humidity (see Note 1) at a temperature of 25° C. (77° F.) for 48 hours. Then apply a second coat of sample using same technic as above. Note any re-emulsification on applying second coat and leveling and spreading properties from appearance of dried film.

If flexibility of film is required, test can be carried out on same test panel.

7. Drying Time. Flow a uniform film of the sample over the surface of a clear glass plate which has been cleaned by immersion in chromic acid cleaning solution followed by thorough rinsing with clear water. Incline the test plate at an angle of 45° to the horizontal and allow it to drain and dry in this position in air maintained at a temperature of 25° C. (77° F.) and 50 per cent relative humidity. Observe time required for film to become dry to touch at a point 15 mm. above lower horizontal edge. Express drying time as period required to nearest minute. If transparency of film is required, observation can be made on this same test panel.

8. Gloss or Lustre. Use a gloss meter consisting of a light source, of constant intensity, directing a substantially parallel beam at the surface to be tested at an angle of incidence of 45°; a photocell, with a spectral-response curve approximating the ICI standard luminosity curve, placed to intercept the reflected beam at an angle of reflection of -45°; a sensitive galvanometer for measuring the e.m.f. generated by the photocell. A meter of this description is supplied by Pfaltz & Bauer, Inc., New York City. Calibrate the gloss meter by placing it on an optical flat, made of glass with an index of refraction of $n_D = 1.5172$, 8 mm. thick, with a fine ground back resting on a non-reflecting black surface. Check the instrument before and after all readings on test panels.

Select a test panel of new brown linoleum from which all wax has been thoroughly removed and record the

gloss of the test panel. Flow a uniform film of the sample onto this test panel, drain and dry at an angle of 45° in air at a temperature of 25° C. (77° F.) and 50 per cent relative humidity for a period of 24 hours, then measure the gloss of the dried film on the test panel with the calibrated gloss meter. Subtract the gloss reading of the test panel from the gloss reading of the dried film on the test panel, multiply the difference by 100, and divide by gloss reading of the test panel to give the percentage increase in gloss.

As an alternative method particularly intended for control testing, it is proposed that a standard test solution consisting of ammonia-water-shellac or sugar in water be developed so that such solution when applied to a linoleum surface will produce a gloss equivalent to an increase of 100 per cent as determined by the gloss meter.

9. Transparency of Film. Clean a piece of clear plate glass using chromic acid cleaning solution and rinse thoroughly. Flow a uniform film of the sample onto one surface of this glass, and allow it to drain and dry at an angle of 45° in air at a temperature of 25° C. (77° F.) and 50 per cent relative humidity. Observe the dried film from the under side of the glass plate by transmitted bright daylight.

10. Flexibility of Film. Prepare linoleum test panel with 2 coats of sample exactly as described under Leveling and Spreading. Alternately the same test panel may be used for both tests. Determine the flexibility of the film at 25° C. (77° F.) and 50 per cent relative humidity by bending the test panel, with the treated surface on the outside, around a mandrel 2 inches in diameter, through an arc of 180°. Observe the film for any cracking or chipping.

11. Abrasion Resistance. Prepare three discs of 1/4" thick, clear plate glass, each 4" in diameter with a 1/4" diameter hole in the center. Clean the discs by the method specified for linoleum test panels. By means of two glass cylinders, one 2" in diameter and one 3 3/4" in diameter, with lower ends ground exactly at right angles to their axes, and dipped into melted paraffin, apply two rings of paraffin to the upper surface of each disc, concentric with the center hole, being careful to avoid contaminating the cleaned glass surface between the two rings. Determine the area of the glass surface between the two paraffin rings in sq. cm. by actual measurement with an accuracy of ± 2 per cent. Mark each glass disc for identification, and weigh each accurately in air at 25° C. (77° F.) and 50 per cent relative humidity. Coat the surface between the two paraffin rings on each disc with a thin uniform film of the original sample by applying between 0.5 and 1.0 ml. of the original sample of water-dispersion wax from a 1 ml. pipette and spreading it uniformly over the entire surface between the paraffin rings with the tip of the pipette. Dry the coated discs in a horizontal position in air at 25° C. (77° F.) and 50 per cent relative hu-

midity for 24 hours, and weigh the discs again accurately under these conditions. Subtract the original weight and divide the difference in milligrams by the area of the wax film in sq. cm. to give the weight of coating in mg. per sq. cm. Abrade the coating on each disc, at 25° C. (77° F.) and 50 per cent relative humidity, on a Taber Abraser, Model J, using Taber CS-10 Calibrase wheels, until the coating has been worn away from approximately 50 per cent of the area of the abrasion track. Clean the wheels by ten cycles on the carborundum paper cleaning discs after each 100 cycles on the wax surface. Subtract the total number of cleaning cycles from the total number of cleaning and abrading cycles. Divide the number of abrasion cycles required for each disc by the weight of the dried coating in mg. per sq. cm. on that disc to give the wear resistance index.

12. Tackiness and Slipperiness. No satisfactory method has yet been developed.

13. Water Resistance. Prepare a test panel on cleaned new linoleum in the manner described under Leveling and Spreading. Place a large drop of distilled water, 1 to 2 cm. in diameter on the treated surface of the test panel. Allow to stand undisturbed for one hour in air at 25° C. (77° F.) and 50 per cent relative humidity. Shake off any remaining water. Observe whether the wax film is damaged or appreciably whitened by the water. Note whether any visible spotting of the film disappears on drying for 1/2 hour at 25° C. (77° F.) and 50 per cent relative humidity.

14. Resistance to Damp Mopping. Wet a clean soft cloth with clear water at 25° C. (77° F.). Wipe the entire treated surface of the test panel used in the Water Resistance test with this wet cloth, exerting moderate pressure and wiping five times at intervals of 2 seconds. Then wipe the test panel dry with a clean, soft, dry cloth. Observe whether the wax film is removed by this process.

15. Removability. Prepare a test panel on cleaned new linoleum in the same manner described under Leveling and Spreading. After aging panel for 48 hours, immerse it in detergent solution same as specified under Leveling and Spreading, for 5 minutes at a temperature of 50° C. (122° F.). Then, with a test panel still immersed, scrub its treated surface moderately with a soft bristle brush, making at least 10 strokes of the brush with moderate hand pressure across each portion of the treated surface. Remove the test panel from the detergent solution, rinse it thoroughly with clear water at 40°-50° C. (104°-122° F.), and wipe dry with a soft, clean cloth. Observe the panel for completeness of removal of wax film after drying.

Note 1. A saturated solution of calcium nitrate ($\text{Ca}(\text{NO}_3)_2 \cdot 4\text{H}_2\text{O}$) at 25° C. (77° F.) gives 50 per cent relative humidity.

"Soap and Sanitary Chemicals" Index

*Monthly Issues for
Years 1943, 1944, 1945, 1946 and 1947*

A	Month	Year	Page
A. A. S. G. P. Releases Potash Soap Census Data	Nov.,	1946	42
AASGP Meets Jan. 28-29	Oct.,	1947	45
Abrasive Cleaners	Apr.,	1943	30
Abrasive Hand Soaps	Mar.,	1943	28
Activated Pyrethrum Mosquito Spray	Feb.,	1944	117
Adulteration and Misbranding	Sept.,	1945	112
	Oct.,	1945	133
	Nov.,	1945	123
Aerosol Bombs vs. Spray Insecticides	July,	1944	111
Aerosol Dispensers, A Test Method for Commercial	Sept.,	1947	119
Aerosol Efficiency, Another View of	July,	1944	113
Aerosol Formulation	May,	1946	135
Aerosol Formulations, Stability of	Nov.,	1947	116
Aerosol Formulations, The Evaluation of Liquefied Gas	Feb.,	1946	133
Aerosol Insecticides	Oct.,	1945	124
Aerosol Marketing	July,	1946	131
Aerosol Method Patented	Oct.,	1943	117
Aerosol Progress, Insecticidal	Feb.,	1947	124
Aerosol Toxicity	June,	1946	157
Aerosols, Dispersants for	Apr.,	1945	123
Aerosols Insecticidal	Aug.,	1946	151
Aerosols, Liquefied Gas—Postwar	July,	1944	108
Aerosols, Pyrethrum for	July,	1944	121
Aerosols, Testing	Sept.,	1943	99
Aerosols, the Expanding Field for	Dec.,	1946	137
Aerosols, Toxicity of	Sept.,	1946	127
Aerosols vs. Oil Spray Insecticides	July,	1944	107
Agricultural Insecticides	Dec.,	1943	121
	Jan.,	1944	119
A.I.F.A. Meets Re-elects Cary	Oct.,	1945	127
Air-Borne Bacteria, Control of	Nov.,	1944	103
Air Deodorizers	May,	1947	131
Air Sterilization, Triethylene Glycol for	June,	1947	133
Alcohols, Fatty	Aug.,	1945	38
Alginate	May,	1947	35
Alkali Outlook, The	Feb.,	1947	50
Alkaline Silicates	Dec.,	1944	63
Alkyl Aryl Sulfonates	Dec.,	1946	46
All-Purpose Soap	July,	1943	25
All-Purpose Soap, Revise Army Specifications for	Apr.,	1944	39
Aluminum Cleaners	Sept.,	1946	44
American Oil Chemists Society Holds 19th Meeting in Chicago	Dec.,	1945	79
Ammonia Substitutes	Jan.,	1943	50
Ammonium, Disinfectants, Quaternary	Mar.,	1944	99
Antioxidants for Pyrethrum Powders	Nov.,	1945	119
Antiseptic Properties in Clothing	Mar.,	1943	93
Antiseptics and Disinfectants, Advances During 1942	Jan.,	1943	97
Antiseptics and Disinfectants as Formulated for the British Market I	Oct.,	1947	127
Antiseptics and Disinfectants as Formulated for the British Market II	Nov.,	1947	133
Antiseptics, Disinfectants and	Jan.,	1944	109
Antiseptics, Disinfectants and I	Jan.,	1947	125
Antiseptics, Disinfectants and II	Feb.,	1947	139
Antu	Apr.,	1947	147
Antu	Oct.,	1946	135

Month	Year	Page
Aphid Control, The Effect of Plant Dispersants on the Toxicity of Rotenone in Ground cube when used for Pea	Oct.,	1944 121
Applications of Synthetics	July,	1946 75
Applying New Insecticide Act	Dec.,	1947 141
Aquatic Weeds, Control of	Nov.,	1945 35
Army Aerosol Program	May,	1944 110
Army Announces New Insect Repellent	Mar.,	1944 129
Army Louse Powder, McCormick & Co. Honored for, Production Record	Nov.,	1944 104
Army Reports on Soap Cutbacks	Dec.,	1945 51
Army Soap	Jan.,	1943 28
Army Specifications All-Purpose Soap, Revise	Apr.,	1944 39
Army Tests its New Insecticides	Mar.,	1944 109
Army's Soap Problems, The	Aug.,	1946 79
Aromatic Chemicals	June,	1946 50
Aromatic Industry, South America Develops	July,	1944 47
Aromatic, Supply Situation, in Chemicals	June,	1944 34
Athlete's Foot Control	May,	1944 115
Auto Polishes	Jan.,	1945 32

B	Month	Year	Page
Bacteria, Control of Air-Borne	Nov.,	1944	103
Bacteria, Destruction in the Laundry	Aug.,	1943	31
Bacteriological Evaluation of Cationic Germicides	May,	1947	139
Bacteriological Evaluation of "Cationics", a Note on the Problem of	June,	1947	151
Base Oils, Insecticide	Jan.,	1944	100
Bedbugs and Their Control	June,	1943	109
Beer Cans for Aerosol Dispensing	Oct.,	1947	122
Bentonite as a Detergent	Oct.,	1945	37
Benzene Hexachloride	Jan.,	1947	115
Bleaching in the Soap Plant	Nov.,	1945	59
Blending, Intimate, of Dust Insecticides	Nov.,	1944	111
Bodman Patent Suit	Apr.,	1943	25
	Dec.,	1943	45
Boiler Compounds	April,	1946	130
Brand Preferences of Ex-servicemen	July,	1946	44
British Methods of Fat Splitting	Jan.,	1947	67
British Soap Industry	May,	1947	33
Britain, Soap Rationing in	Dec.,	1944	39
British Synthetic Soap Cake	Nov.,	1947	69
Bubble Solutions	Jan.,	1946	36
Builders, Comparison of Soap	Dec.,	1943	63

C	Month	Year	Page
Canada Raises Soap Price Ceilings	June,	1947	53
Canadian Soap Industry	Oct.,	1947	46
Carnauba and Other Waxes, Suspend OPA Ceilings on	Nov.,	1945	131F
Carnauba Wax Mess, The	Sept.,	1945	114
Carpets, Cleaners for, Rugs and Upholstery	Nov.,	1944	33
Castor Oil	Jan.,	1943	24
Castor Oil	July,	1945	42
Castor Oils, Linseed and	Mar.,	1944	27
Cation-Active Agents	Mar.,	1947	145
Cation-Active Germicides	Aug.,	1947	151
Cationic Germicidal Agents	Aug.,	1944	99

	Month	Year	Page
Cationic Germicides, Bacteriological Evaluation of	May,	1947	139
Cations, Properties and Uses of Surface-Active	Mar.,	1947	39
Cattle, Insect Control on	Nov.,	1943	96
Caustic, Fat Splitting with	Dec.,	1943	131
Caustic Potash	Feb.,	1947	79
Cedar Wood Oil	Mar.,	1946	41
Charring of Soap	May,	1943	94
Chicken Louse Control	June,	1943	63
Chigger Repellents	Aug.,	1944	113
Chlorinated, Dry-Cleaning Solvents	Nov.,	1946	133
Chlorine Dioxide for Fat Bleaching	Mar.,	1944	57
Chlorine Disinfectants	Sept.,	1946	40
Chlorine in DDT Insecticides, Determination of	Aug.,	1943	105
Cleaners, Abrasive	Oct.,	1947	147
Cleaners, Abrasive	Apr.,	1943	30
Cleaners, Aluminum	Sept.,	1943	61
Cleaners, Floor Soaps and	June,	1945	44
Cleaners, Hand	Sept.,	1946	45
Cleaners, Paint and Wallpaper	June,	1947	36
Cleaners for Carpets, Rugs and Upholstery	Sept.,	1943	61
Cleaners, Industrial Metal	Dec.,	1945	37
Cleaners, Leather	Nov.,	1944	33
Cleaners, Rug and Upholstery	Apr.,	1944	34
Cleaners, Special for the Dairy Plant	Sept.,	1944	39
Cleaning and Polishing Cloths	May,	1944	25
Cleaning Compound Specification	Nov.,	1944	37
Cleaning, Dry, Soaps	Feb.,	1947	129
Cleaning, Railroad Car	May,	1943	31
Clothing, Antiseptic Properties in	Feb.,	1943	69
Coal Tar Disinfectants, Farm Uses for	Dec.,	1944	33
Coating Soap Granules	June,	1947	33
Cockroaches and Their Control	Mar.,	1943	93
Coconut Oil	Feb.,	1945	106
Coconut Oil Market Outlook, The	Oct.,	1943	65
Coconut Oil Market Outlook, The	Sept.,	1943	94
Coconut Oil Supply Situation	May,	1945	29
Coconut Shortage Forces Revision in Soap Specifications	Aug.,	1946	39
Colored Shoe Polishes	Oct.,	1945	42
Colors for Chemical Compounds	Oct.,	1943	31
Committee D-12 Meets	Oct.,	1943	69
Concentrated Sprays	Sept.,	1947	116
Container Situation	Feb.,	1946	137
Continuous Methods, a Review of	Mar.,	1947	49
Continuous Process for Soap Making, A French	Apr.,	1946	145
Continuous Process Soap Making (I)	Jan.,	1943	111
Continuous Process Soap Making (II)	Jan.,	1946	59
Continuous Processes, More Observations for the Small Soaper on II	Oct.,	1947	73
Continuous Processes, Some Observations for the Small Soaper on I	Nov.,	1947	65
Containers, Soap	Dec.,	1947	73
Copaiba Oil	Mar.,	1947	73
Counter Current Soap Washing	Mar.,	1947	73
C-P-P Paper Conservation Program	Feb.,	1947	75
Cream Shampoos	Jan.,	1944	21
Cracking of Toilet Soaps	Aug.,	1943	25
Cube, The Effect of Plant Dispersants on the Toxicity of Rotenone in Ground, when used in Pea Aphid Control	Aug.,	1946	75
Cyclohexenone, Toxicity Data on Piperonyl	Aug.,	1946	75

D

Dairy Plant, Special Cleaners for the	Aug.,	1947	137
DDT	Jan.,	1946	121
DDT against House Flies	Dec.,	1943	117
DDT and DDT Emulsion Concentrates, Propose New Federal Specs for	Mar.,	1946	126
DDT and the Public Interest	Aug.,	1947	137
DDT, Discuss at Purdue Conference	Jan.,	1946	121
DDT During Dry Cleaning, Mothproofing with	Feb.,	1945	143
DDT Emulsion Concentrates	May,	1947	36
DDT Emulsion Concentrates	Dec.,	1946	155

DDT for Control of Roaches	Nov.,	1946	121
DDT, Insecticides, Labeling	May,	1945	135
DDT Insecticides Rushed on Market	Sept.,	1945	124A
DDT Inventors Visit U. S.	Sept.,	1945	124D
DDT Labeling Instructions Issued by Insecticide Division	Sept.,	1945	124E
DDT License Agreements, Offer	Jan.,	1945	127
DDT, More About	July	1943	101
DDT or Pyrethrum, The Effect of Fly Food on Resistance to Insecticides Containing	Dec.,	1944	147
DDT Outlook	Dec.,	1945	165
DDT, Postwar Uses for	June,	1944	127
DDT Publications	Feb.,	1945	109
DDT Residues	May,	1944	107
DDT, Solvents for	Aug.,	1947	123
DDT Sprays to Livestock, Toxicity of	Nov.,	1945	110
DDT, The Residual Toxicity of	Sept.,	1946	124
DDT, The Setting Point of	Dec.,	1945	141
DDT, The Story of	May,	1945	111
DDT Test Results, Report	July,	1944	115
DDT—Thanite Sprays for Mosquitoes	Apr.,	1945	139
DDT, Toxicity of	Mar.,	1945	119
DDT Toxicity	Jan.,	1945	125
DDT Toxicity	July,	1946	135
DDT—Up To Date	Jan.,	1945	99
DDT, WPB Lifts Restrictions on	Dec.,	1945	161
DDT, Why the, Mystery?	Feb.,	1945	123
Decisions, A Review of Legal, Affecting Soap Makers	Aug.,	1945	125
Decolorizing, Oil	Apr.,	1944	135
Decontrol, in the wake of	Jan.,	1944	31
Delousing of Garments by Dry Cleaning	Dec.,	1946	41
Dentifrice Market	Aug.,	1943	94
Dentifrice Market, Tide Surveys	May,	1943	29
Dentifrices, Abrasion of	Sept.,	1945	65
Deodorants, Household	Sept.,	1943	63
Deodorized Petroleum Base Oils	July,	1944	33
Deodorizers, Air	April,	1946	149
Dermatitis, Industrial	May,	1947	131
Dermatitis, Occupational	Feb.,	1944	63
Dermatitis Prevention	June,	1944	31
Dermatitis, Soap and	Oct.,	1943	67
Detergency, Principles of	Apr.,	1943	57
Detergency Studied	Sept.,	1944	57
Detergent, Bentonite as a	June,	1946	53
Detergent, Soap-Containing Synthetic	Oct.,	1945	37
Detergents, D-12 Discusses	Dec.,	1945	41
Detergents, Evaluation of	July,	1943	57
Detergents for Sea Water	Feb.,	1943	61
Detergents from Petroleum	May,	1945	57
Detergents, History of Synthetic	Aug.,	1943	59
Detergents, Mersolate—Their Production and Blending with Soaps	July,	1943	30
Detergents, Salt Water	June,	1947	40
Detergents, Solvent Power of	Jan.,	1943	21
Detergents, Synthetic	Oct.,	1944	63
Determination of Chlorine in DDT Insecticides	Aug.,	1943	21
Determination of DDT, The	Sept.,	1943	29
Determination of Freon Insolubles in Pyrethrum Extracts	Oct.,	1943	27
Determining Tack of Self Polishing Wax Films	Nov.,	1943	31
Deupree Describes P & G Guaranteed Work Plan	Dec.,	1943	25
Development of Mersol	Mar.,	1947	37
Dilutents, Insecticide	Apr.,	1947	45
Dishes, Sanitizing	Sept.,	1946	37
Dish Washing, Germicidal	Oct.,	1947	147

	Month	Year	Page
Dishwashing Compound, Propose New Specification for.....	May,	1947	36
Dishwashing Compound Tests	May,	1945	55
Dishwashing Detergents	June,	1947	43
Dishwashing Detergents, Evaluating	Apr.,	1947	48
Dishwashing Sanitation I	Jan.,	1945	25
Dishwashing Sanitation II	Feb.,	1945	42
Dishwashing Sanitation	Aug.,	1944	29
Disinfectant Specifications	July,	1943	97
Disinfectant Symposium	Aug.,	1944	98
Disinfectant Testing	Apr.,	1943	101
	July,	1946	127
Disinfectant Testing, Synthetic and Semi-synthetic Media for.....	Jan.,	1945	113
Disinfectant Testing, Pine.....	Dec.,	1944	141
Disinfectants and Antiseptics.....	Jan.,	1944	109
	Feb.,	1946	125
	Mar.,	1946	133
Disinfectants and Antiseptics I.....	Jan.,	1947	125
Disinfectants and Antiseptics II.....	Feb.,	1947	139
Disinfectants and Antiseptics, Advances During 1942	Jan.,	1943	97
Disinfectants as Formulated for the British Market, Antiseptics and.....	Oct.,	1947	127
Disinfectants, Chlorine	Aug.,	1943	105
Disinfectants, Evaluation of.....	Aug.,	1944	101
Disinfectants for the Armed Forces.....	Aug.,	1943	101
Disinfectants, Halogenated Hydroxydiphenyl Methanes as	Feb.,	1944	111
Disinfectants, Organic Mercurials.....	Dec.,	1946	141
Disinfectants, Postwar Problems in Testing.....	Mar.,	1947	129
Disinfectants, Post-War View of.....	June,	1944	119
Disinfectants, Quaternary Ammonium.....	Mar.,	1944	99
Disinfectants, Synthetic Phenol.....	Aug.,	1943	103
Disinfecting Testing Errors.....	Mar.,	1944	111
Disinfectants, The Formulation of Phenolic.....	Apr.,	1945	117
Dispersants for Rotenone.....	Sept.,	1944	107
Dispensers, Soap	Dec.,	1943	30
	Oct.,	1944	117
Dispersants, The Effect of Plant, on the Toxicity of Rotenone in Ground Cube When Used for Pea Aphid Control.....	Oct.,	1944	121
Distribution of Sodium Phosphates, Use and.....	Aug.,	1944	32
Divisible Soap Bar, Making a.....	Nov.,	1944	70
"Do's and Don't's" in Household Insecticide Application	April,	1946	134
Dry Cleaning as Means for Delousing Garments.....	Aug.,	1943	94
Dry-cleaning, Chlorinated, Solvents.....	Mar.,	1944	57
Dry Cleaning Soaps.....	Dec.,	1944	33
	July,	1946	48
Dust Insecticides, Intimate Blending of.....	Nov.,	1944	111
Dusts, Rotenone, and Sprays.....	Apr.,	1944	125

E

Eastern NSSA Meets in New York.....	Dec.,	1947	174A
Economic Poison Laws.....	Nov.,	1947	115
Economic Poisons Officials Meet.....	Nov.,	1947	159
Economic Poisons, Safer Handling of.....	Dec.,	1944	115
Effect of Storage on Insect Repellents.....	Oct.,	1946	151
Electron Microscope Studies Bright-Drying Wax Dispersions	Aug.,	1947	131
Emulsions, Facts About.....	Apr.,	1944	67
Entomological Laboratory, Camera Trip Through Stanco's	Nov.,	1944	98
Entomologists Hold Joint Session.....	Jan.,	1945	121D
Entomophobia	Mar.,	1944	105
Epidemic Control..... with DDT, Antu and 1080 I	May,	1947	127
Epidemic Control..... with DDT, Antu and 1080 (II)	June,	1947	153
Equipment Trend, Soap.....	May,	1943	59
Essential Oil Dealers Meet.....	Feb.,	1945	49
Essential Oil Market Outlook.....	June,	1944	61
Essential Oil Outlook.....	Mar.,	1944	21
	Nov.,	1944	39
Essential Oil Prices.....	Feb.,	1944	28
Estimation of Pyrethrins.....	Sept.,	1947	131
Evaluating Dishwashing Detergents.....	Apr.,	1947	48
Evaluating Germicide, Considerations.....	Oct.,	1946	145
Evaluation of "Cationics," a Note on the Problem of Bacteriological.....	July,	1947	151

Evaluation of Synthetic Detergents.....	May,	1947	69
Evaporation, Glycerine	Jan.,	1944	57
Experiment Stations Report on 1943 Insecticide Studies	Dec.,	1944	123
Export Controls, Soap	Aug.,	1947	35
Extruded Soap, Mfr. of.....	Dec.,	1943	61

F

Fat and Oil Outlook.....	Oct.,	1946	43
Fat and Oil Supplies.....	Jan.,	1946	38
Fat Bleaching, Chlorine Dioxide for.....	Sept.,	1946	40
Fat Hardening Process.....	Mar.,	1947	77
Fat Rationing Questions Answered.....	Dec.,	1945	44
Fat Salvage	Jan.,	1944	24
Fat Salvage Plan, Akron.....	July,	1943	28
Fat Splitting, British Methods of.....	Jan.,	1947	121
Fat Splitting, Glycerine by.....	June,	1943	61
Fat Splitting, Modern, Methods.....	Aug.,	1944	57
Fat Splitting with Caustic.....	Feb.,	1947	79
Fat Use Drops, Soapers 2nd Quarter.....	Nov.,	1945	43
Fats in 1945, W. H. Jasspon Warns Soapers to Conserve	Feb.,	1945	39
Fatty Acid Selection	Dec.,	1946	43
Fatty Acid Soap Process.....	Sept.,	1943	32
Fatty Acid Trends.....	May,	1947	41
Fatty Acids from Paraffins.....	June,	1945	71
Fatty Acids in Potash Soaps.....	Mar.,	1946	67
Fatty Acids in Postwar Soaps.....	Feb.,	1945	63
Fatty Acids, New.....	Nov.,	1943	37
F. D. A. Method, Revamping the.....	Apr.,	1947	138
F. D. A. Phenol-Coefficient Test, Increasing Efficiency of	Oct.,	1947	73
FDA Reviews Glycerine Production and Use.....	May,	1944	34
FDO Orders Interpreted.....	June,	1943	25
FDO 86 Reviewed.....	Nov.,	1943	28
Federal Spec. for Painted Surface Cleaner, New	Aug.,	1947	43
Finishing Device, Survey of Soap.....	Sept.,	1944	61
Fitch Case, The	Nov.,	1947	40
Flake Equipment, Soap.....	Feb.,	1943	57
Floating Soap Patent Suit.....	Apr.,	1943	25
	Dec.,	1943	45
Floor Finish, What Is a Safe.....	Oct.,	1944	111
Floor Oils and Sweeping Compound.....	Jan.,	1946	32
Floor Slipperiness.....	Aug.,	1943	113
Floor Soaps and Cleaners.....	June,	1947	36
Floor Wax Market, A Statistical Survey.....	Dec.,	1947	155
Floor Wax, N.A.I.D.M. Specification.....	June,	1943	113
Floor Wax Tests	June,	1945	133
Floor Wax? Which	Sept.,	1946	122
Floors, Safe Oils for.....	Jan.,	1944	103
Fluorine Insecticides.....	Mar.,	1943	99
Fly Control Campaigns.....	May,	1947	167
Fly Control in Stables.....	Dec.,	1943	117
Fly Food, Powdered Milk as.....	Sept.,	1944	105
Fly Larvicide Tests.....	Mar.,	1947	141
Fly Spray Kill.....	Apr.,	1943	105
Food Damage, Insect.....	Dec.,	1943	113
Food Establishments, Sanitation in.....	Jan.,	1947	121
Formula Changes, Soap.....	Nov.,	1943	25
Fractionation, Cold, of Fatty Oils.....	Dec.,	1946	75
French Continuous Process for Soap Making, A	Oct.,	1947	73
Freon-Insolubles in Pyrethrum Extract. Determination of	Jan.,	1947	133
Fumigation, Methyl Bromide.....	Mar.,	1944	96
Fungicide, New	May,	1946	126
Furniture Polishes	Oct.,	1946	130

G

German Insecticide Evaluation	Mar.,	1946	122
German Synthetic Fats.....	Aug.,	1947	69
German Insecticide Research	Feb.,	1946	122
German Soap Substitutes	Oct.,	1946	145
Germicidal Activity of Quaternary Ammonium Compounds, Testing the	Sept.,	1946	131
Germicidal Agents, Cationic.....	Aug.,	1944	99
Germicidal Dish Washing.....	July,	1947	69
Germicidal Performance, Effect of Organic Matter on	Feb.,	1944	103

	Month	Year	Page
Germicidal Performance of Quaternary Ammonium Disinfectants, an inquiry into the.....	Jan.,	1946	125
Germicides, Considerations in Evaluating.....	Oct.,	1946	145
Germicides, Quaternary Ammonium.....	Aug.,	1944	98
Germicides, Quaternary Ammonium.....	June,	1947	145
Gesarol	Dec.,	1943	117
	July,	1943	101
Gift Soaps, Trend in.....	Dec.,	1943	36
G. I. Soap.....	Jan.,	1943	28
Glass Cleaners	Jan.,	1945	28
Glycerine	Aug.,	1947	41
Glycerine by Fat Splitting.....	June,	1943	61
Glycerine Distillation	June,	1945	73
Glycerine Evaporation	Jan.,	1944	57
Glycerine, FDA Reviews, Production and Use.....	May,	1944	35
Glycerine Outlook	Feb.,	1945	33
	July,	1946	39
Glycerine Recovery from Lye.....	Nov.,	1943	61
Glycerine Recovery, Small Plant.....	May,	1943	57
Glycerine, Refining Crude.....	Feb.,	1944	61
Glycerine Supply	Feb.,	1944	33
Glycerine Uses, Analysis of Miscellaneous.....	Feb.,	1945	46
Government Soap Purchases, Review.....	Sept.,	1944	39

H

Hand Cleaners	Sept.,	1943	61
Hand Cleaners, Industrial.....	Mar.,	1945	33
Hand Soap, Quality Defined.....	Oct.,	1943	77
Hand Soaps, Abrasive.....	Mar.,	1943	28
Hand Soaps in War-time Market.....	Feb.,	1943	28
Heating of Soap.....	June,	1943	63
Higher Fatty Alcohols	Sept.,	1946	69
Household Deodorants	July,	1944	33
Household Insecticides, Are, Luxuries.....	Aug.,	1944	96

I

Insect Repellents, New.....	Mar.,	1947	124
Industrial Dermatitis	Feb.,	1944	63
Industrial Metal Cleaners.....	Apr.,	1944	34
Industrial Soaps	Jan.,	1947	40
Insect, Army Announces New, Repellent.....	Mar.,	1944	129
Insect Control in Food Production.....	Feb.,	1943	94
	Mar.,	1943	90
Insect Control on Aircraft.....	Feb.,	1943	111
Insect Control on Livestock.....	Nov.,	1943	96
	Dec.,	1943	131
Insect Food Damage.....	Dec.,	1943	113
Insect Repellents	Jan.,	1945	121
	Mar.,	1943	103
Insect Repellents, Effect of Storage on.....	Oct.,	1946	151
Insect Repellency Testing	Mar.,	1945	104
Insecticidal Aerosol Progress.....	Feb.,	1947	124
Insecticidal Aerosols	Aug.,	1946	151
Insecticidal Cords	Oct.,	1946	139
Insecticidal Residues, Testing.....	Oct.,	1947	124
Insecticide Act, Applying New.....	Dec.,	1947	141
Insecticide Act, New.....	Aug.,	1947	114
Insecticide Act, New	Jan.,	1945	103
Insecticide Act Regulations.....	Oct.,	1947	160A
Insecticide Act of 1910, Enforcement of.....	Jan.,	1943	109
Insecticide Act, The, and Its Enforcement.....	Jan.,	1946	119
Insecticide and Disinfectant Manufacturers Meet.....	Jan.,	1946	114
Insecticide Bill, New.....	Feb.,	1947	133
Insecticide Coloration	Mar.,	1943	109
	Jan.,	1943	117
Insecticide Diluents	Aug.,	1944	103
Insecticide Kill	June,	1943	117
Insecticide Laboratory for Hercules Powder Company, New	Aug.,	1945	114
Insecticide Marketing Problems.....	Jan.,	1943	105
Insecticide Marketing	June,	1945	129
Insecticide Material, New.....	Mar.,	1943	107
Insecticide, New British	May,	1945	103
Insecticide, Official Test.....	June,	1945	137
Insecticide Outlook	Aug.,	1945	112
Insecticide Packages, Standardization of.....	Aug.,	1943	97
	Nov.,	1943	123

Month Year Page

Insecticide Possibilities of Yam Bean Seed.....	May,	1943	105
Insecticide Raw Material Outlook.....	Nov.,	1943	107
Insecticide Raw Materials, The Outlook for.....	Oct.,	1944	109
Insecticide Research	Sept.,	1945	121
Insecticide Residues, Testing.....	June,	1947	139
Insecticide, Soaps for, Use.....	Nov.,	1944	63
Insecticide Specification, Ohio State.....	Mar.,	1943	113
Insecticide Studies, Experiment Stations Report on 1943	Dec.,	1944	122
Insecticide Supply Outlook.....	Jan.,	1944	99
Insecticide Test, Small Chamber Method.....	Feb.,	1943	101
Insecticide Testing	June,	1944	114
	July,	1944	123
Insecticide Testing	June,	1945	125
Insecticide Testing, Rapid.....	Apr.,	1943	94
Insecticide Toxicity Studies	Nov.,	1945	117
Insecticides, Aerosol	Oct.,	1945	124
Insecticides, Aerosol Bombs vs. Spray.....	July,	1944	111
Insecticides Aerosols vs. Oil Spray.....	July,	1944	107
Insecticides After the War.....	July,	1943	111
Insecticides, Agricultural (Part II).....	Jan.,	1944	119
Insecticides, Are Household, Luxuries.....	Aug.,	1944	96
Insecticides, Army Tests its New.....	Mar.,	1944	109
Insecticides, Concentrated	July,	1945	109
Insecticides Containing DDT or Pyrethrum, The Effect of Fly Food on Resistance to.....	Dec.,	1945	165
Insecticides Containing DDT, Trade Marked.....	Apr.,	1945	137
Insecticides, Fluorine	Mar.,	1943	99
Insecticides, Intimate Blending of Dust.....	Nov.,	1944	111
Insecticides, New	Jan.,	1943	95
Insecticides, New German	Dec.,	1945	138
Insecticides, Newer Synthetic.....	May,	1947	127
Insecticides, Toxicity Studies on.....	Feb.,	1944	107
Insecticides, What's Ahead for.....	June,	1947	135
Intimate Blending of Dust Insecticides.....	Nov.,	1944	111

J

Jobber, The	June,	1946	161
-------------------	-------	------	-----

K

Kettle, Soap, Experimental.....	Feb.,	1943	59
Kill, Fly Spray.....	Apr.,	1943	105
Kill of Insecticides.....	June,	1943	117
Kosher Soap Hit by Oil Ban.....	Feb.,	1943	37
Kranich Soap Company—1921 to 1946.....	Jan.,	1947	33

L

Lanham Act, The	June,	1947	31
Lanolin Soaps	Apr.,	1945	41
Lard, Defend, Release for Soap.....	Feb.,	1944	43
Larvicide, A New Mothproofing.....	July,	1947	143
Larvicide Tests, Fly	Mar.,	1947	141
Latin America as a Source of Rotenone.....	Sept.,	1944	101
Laundering Factors, Study of.....	June,	1946	79
Laundries, Operation of Mobile.....	June,	1944	47
Laundry, Destruction of Bacteria in the.....	Aug.,	1943	31
Lavender Oils, The Analysis of.....	Feb.,	1946	40
Leather Cleaners	Sept.,	1944	29
Leather Stain Removal.....	Jan.,	1943	61
Lecithin in Soap	May,	1946	37
Legal Decisions, A Review of, Affecting Soap Makers	Sept.,	1944	32
Legal Phases of the Soap Business.....	Apr.,	1945	45
Legislation in 1945.....	June,	1945	127
Lethane Supply Situation.....	Jan.,	1944	100
Lignin as a Detergent Ingredient.....	Mar.,	1945	40
Lined Drums for Shipping Soaps.....	May,	1946	71
Linseed and Castor Oils.....	Mar.,	1944	27
Linseed Oil	Feb.,	1943	24
Liquefied-Gas Aerosol Formulations, the evaluation of	Feb.,	1946	133
Liquid Soap, Manufacture of.....	May,	1944	57
Liquid Soap, Phosphates in	Aug.,	1946	49
Liquid Soaps in Glass Containers.....	Nov.,	1947	33
Liquid Soaps, Problems in Packaging.....	Apr.,	1946	45
Livestock Insect Control.....	Nov.,	1943	96
	Dec.,	1943	131

	Month	Year	Page
Livestock Sprays	Aug.	1946	135
Locomotives Cleaned by Chemical Shower.....	Aug.	1946	41
Louse Control, Chicken.....	Aug.	1944	113
Louse Powder, Army.....	July,	1943	101
	Nov.,	1943	104
Louse Powder, McCormick & Co. Honored for Army, Production Record.....	Nov.,	1944	104

M

Market Outlook, Essential Oil.....	June,	1944	61
Market Outlook, The, in Rosin.....	Aug.,	1944	109
Market Problems, Insecticide.....	Jan.,	1943	105
Market, The, for Better Grade Toilet Soaps.....	Dec.,	1944	41
Market, The Poultry, for Sanitation Products.....	Sept.,	1944	98
Marketing Research in the Sanitary Chemical Field I	Aug.,	1945	117
Marketing Research in the Sanitary Chemical Field II.....	Sept.,	1945	111
Mazzoni Soap Drying Process, The.....	May,	1917	38
McCormick & Co. Honored for Army Louse Powder, Production Record.....	Nov.,	1944	104
Medicine, Soap in.....	July,	1944	29
Medium for Study of Quaternary Bacteri- cides, A New.....	Aug.,	1947	119
Mersol, Development of.....	Apr.,	1947	81
Mersolate Detergents—Their Production and Blending with Soaps.....	June,	1947	40
Metal Cleaners, Industrial.....	Apr.,	1944	34
Metal Cleaners, Propose New Federal Speci- fications for	June,	1947	77
Metal Polishes	Dec.,	1946	147
Methanes, as Disinfectants, Halogenated Hy- droxy-diphenyl	Feb.,	1944	111
Methyl Bromide, Fumigation.....	Mar.,	1944	96
Mildew Preventives	Nov.,	1947	119
Milk, Powdered, as Fly Food.....	Sept.,	1944	105
Milling, Soap	July,	1944	61
Misbranding, Adulteration and	Oct.,	1945	133
	Nov.,	1945	123
Mobile Laundries, Operation of.....	June,	1944	47
Modified Rosins	June,	1946	43
Mosquito Larvicide Tests	Nov.,	1946	118
Mosquito, Spray, Activated Pyrethrum.....	Feb.,	1944	111
Moths and Their Control.....	Oct.,	1943	102
Mothproofing Larvicide, A New.....	June,	1947	143
Mothproofing with DDT During Dry Clean- ing	May,	1947	122

N

N. A. I. D. M. Elects Baird at 34th Annual Meeting	Dec.,	1947	134
N. A. I. D. M. Meets.....	June,	1946	146
	July,	1946	122
	Dec.,	1946	130
N.A.I.D.M. Meets Dec. 3-4 in N. Y.....	Nov.,	1945	131F
N. A. I. D. M. Meets in Chicago.....	June,	1947	130
N. A. I. D. M. Meets in Chicago.....	July,	1947	123
N.A.I.D.M. Meets in New York.....	Dec.,	1945	134
N. A. I. D. M. Meets in New York Dec. 2-4.....	Nov.,	1946	151
N. A. I. D. M. Meets June 9-11.....	May,	1947	157
N. A. I. D. M. to Meet December 1-3.....	Nov.,	1947	157
N.A.I.D.M. Meets, Re-elects Nelson.....	Jan.,	1945	92
N.A.I.D.M. Committees	Mar.,	1945	137
N.A.I.D.M., The President Reports to.....	June,	1945	122
N. A. I. D. M.—U. S. D. A. Report on Quaternary Ammonium Testing	Sept.,	1947	135
Napalm, Liquid Soaps from.....	Dec.,	1946	49
NaOH, Effect on Dissolved Soap.....	Nov.,	1943	63
Naval Stores Chemicals in the Disinfectant Field	Dec.,	1947	147
New Federal Spec. for Painted Surface Cleaner	Aug.,	1947	43
New Insect Repellents.....	Mar.,	1947	124
New Insecticide Act.....	Aug.,	1947	114
New Insecticide Bill.....	Feb.,	1947	133
New Insecticide, Progress Report on a.....	Jan.,	1947	117
New Medium for Study of Quaternary Bac- tericides, A	Aug.,	1947	119

New Mothproofing Larvicide.....	June,	1947	143
New Soap Making Processes.....	Sept.,	1944	25
	Oct.,	1944	39
New Specification for Liquid Insecticide, Propose	Nov.,	1947	141
Newer Industrial Uses for Soap.....	Aug.,	1944	25
Newer Synthetic Insecticides.....	June,	1947	127
Novelty Soaps	Mar.,	1947	33
N.P.C.A. Meets, Elects Hockenyos.....	Nov.,	1947	167
N.S.S.A. Atlanta Meeting.....	Nov.,	1947	161
N.S.S.A. Meets	Jan.,	1947	143
N.S.S.A. Meets, Elects Lovinger.....	May,	1947	145
N.S.S.A. 24th Annual Convention.....	June,	1947	166A

O

Oil and Fat Outlook.....	Oct.,	1946	43
Oil and Fat Prices Advance Sharply.....	Oct.,	1947	44
Oil, Characteristics of Tall.....	Mar.,	1944	59
Oil Decolorizing	May,	1944	31
Oil, Essential, Outlook.....	Mar.,	1944	21
	Nov.,	1944	39
Oil, Essential, Prices.....	Feb.,	1944	28
Oil, Palm	Apr.,	1944	33
Oil Samples, Rapid Determination of.....	Mar.,	1943	57
Oil Spray Insecticides, Aerosols Vs.....	July,	1944	107
Oil, Tall, in Soap.....	June,	1944	29
Oil Types Used in Pest Control Work.....	Mar.,	1945	115
Oil Chemists Meet in Chicago.....	Nov.,	1947	36
Oil Chemists Meet in New Orleans.....	June,	1947	47
Oils and Fats in 1947.....	Feb.,	1947	47
Oils for Bed Bug Sprays, Specifications and Terminology of Base.....	Mar.,	1945	109
Oils, Insecticide Base.....	Jan.,	1944	100
Oils, Linseed and Castor.....	Mar.,	1944	27
Oils, Safe, for Floors.....	Jan.,	1944	103
Oils, Soluble	Mar.,	1945	63
Oils Used by Pest Control Operators, Petroleum	Mar.,	1945	109
Olive Oil Supply Outlook.....	July,	1944	36
OPA Order Permits Advances in Prices of Rote- none and Pyrethrum.....	July,	1944	131
	Aug.,	1944	115
Organic Mercurials as Disinfectants	Dec.,	1946	141
Outlook, DDT	June,	1944	127
Outlook, Essential Oil.....	Nov.,	1944	39
Outlook for DDT and DDT Insecticides.....	Sept.,	1947	114
Outlook, Insecticide Supply.....	Jan.,	1944	99
Outlook, Postwar, for the Sanitary Supply Dealer	July,	1944	127
Outlook, Post War Soap.....	Dec.,	1944	33
Outlook, Pyrethrum Supply.....	Jan.,	1944	100
Outlook, Raw Material, for the Toilet Goods Industry	June,	1944	37
Outlook, Soap Supply.....	May,	1944	28
Outlook, The, for Insecticide Raw Materials.....	Oct.,	1944	109
Outlook, The Market, in Rosin.....	Aug.,	1944	109

P

Packages, Standard Insecticide.....	Nov.,	1943	123
Packaging—A Stepchild of Advertising.....	May,	1945	100
Paint and Varnish Removers.....	June,	1946	153
Paint and Wallpaper Cleaners.....	Dec.,	1945	37
Painted Surface Cleaner, New Federal Spec. for	Aug.,	1947	43
Paper, C-P-P, Conservation Program.....	Feb.,	1944	41
Pea Aphid Control, The Effect of Plant Dispers- ants on the Toxicity of Rotenone in Ground Cubé When Used for.....	Oct.,	1944	121
Pea Aphid Control, Thiocyanates for.....	Feb.,	1943	105
Perfume Material Outlook, The French.....	Oct.,	1945	41
Perfumes, Soap	June,	1946	83
Perfuming Milled Toilet Soap.....	Apr.,	1947	83
Perfuming, Soap	May,	1943	21
	Dec.,	1945	67
Perfuming Your Soap (I).....	June,	1947	65
Perfuming Your Soap (II).....	Aug.,	1947	65
Pest Control Meeting, Oct. 27-29.....	Oct.,	1947	177
Pest Control Operator, Problems of the.....	May,	1943	101

	Month	Year	Page
Petroleum Base Oils, Deodorized	April	1946	149
Petroleum, Detergents from	Aug.	1943	59
Phosphates, Action of	June	1947	75
Phenol Disinfectants, Synthetic	Aug.	1943	103
Phosphates in Liquid Soap	August	1946	49
Phosphates, New Uses for	Jan.	1943	52
Pine Disinfectant Testing	Dec.	1944	141
Piperonyl Cyclohexenone, Toxicity Data on	June	1947	163
Piperonylamides, Synergistic Action of	Apr.	1943	105
Planning for a Sales Campaign	Dec.	1947	36
Planning, Post War	Jan.	1944	105
Plodding, Soap	July	1944	63
Poisons, Safer Handling of Economic	Dec.	1944	115
Polishes, Silver	Aug.	1946	42
Polishing Cloths, Cleaning and	Feb.	1947	129
Polyphosphates, New	Nov.	1946	67
Port Sunlight, Soap Making at	Apr.	1947	41
Portable Laundries and Shower Baths for The Fighting Front	Feb.	1945	70
Postwar Outlook for the Sanitary Supply Dealer	July	1944	127
Postwar Problems in Testing Disinfectants	Mar.	1947	129
Post-War Planning	Jan.	1944	105
Post-War Plans	Apr.	1944	114
Post-War Soap Outlook	Dec.	1944	33
Post War View of Disinfectants	June	1944	119
Potash Soap Assn. Holds Open Forums	June	1947	44
Potash Soap Decontrol	Oct.	1946	45
Potash Soap Industry, The	Feb.	1945	40
Potash Soap Manufacturers Form New Association	Nov.	1946	37
Potash Soap Output, 1944	Oct.	1945	47
Potash Soap Questions	Mar.	1944	30
Potash Soap Situation	Mar.	1944	29
Potash Soapers Meet	Feb.	1947	45
Potash Soaps, Fatty Acids in	Mar.	1946	67
Potash Soaps, Raw Materials for	June	1943	34
Potash Soaps vs. Synthetic Detergents	May	1946	43
Poultry Market, The, for Sanitary Products	Sept.	1944	98
Powdered Milk as Fly Food	Sept.	1944	105
Powders, Synthetic Roach	May	1944	102
Practical Aspects of Quaternaries	Dec.	1947	130
Preparing Soap Samples with the Laboratory Press	Sept.	1947	33
Price Relief for Soapers	June	1945	41
Price Violations to OPA, Soapers Asked to Report	June	1945	43
Private Brand Toilet Soaps	Jan.	1947	36
Problems in Packaging Liquid Soaps	April	1946	45
Processes, New Soap Making	Sept.	1944	25
Progress Report on a New Insecticide	Oct.	1944	39
Properties and Uses of Surface-Active Cat- ions	Jan.	1947	117
Propose New Federal Specs. for DDT and DDT Emulsion Concentrates	Mar.	1947	39
Propose New Federal Specifications for Metal Cleaners	Aug.	1947	137
Propose New Specification for Dishwashing Compound	June	1947	77
Propose New Specification for Liquid In- secticide	May	1947	36
Protective Creams	Nov.	1947	141
Protective Creams	Nov.	1947	141
Protective, Creams, Skin	July	1943	59
P.S.A. Plans Meeting Jan. 27	Feb.	1944	43
Public Health Assn. Meets	Nov.	1947	49
Purchases, Review Gov't Soap	Nov.	1947	165
Pyrethrin Content Studies	Sept.	1944	39
Pyrethrin I, Determination of	April	1946	157
Pyrethrins Deterioration, Determination of	July	1946	148A
Pyrethrins, Estimation of	Oct.	1946	155
Pyrethrins for Aerosols	Sept.	1947	131
Pyrethrum	July	1944	121
Pyrethrum Active Principles	Apr.	1944	121
Pyrethrum Analysis	Apr.	1943	113
Pyrethrum Controls, Drop	Nov.	1943	111
Pyrethrum Culture	Apr.	1943	100
Pyrethrum Expansion Costly, Says Kenya Head	Sept.	1945	124D
Pyrethrum Extract, Determination of Freon- Insolubles in	Feb.	1945	117
Pyrethrum Extract, Evaluating	Jan.	1947	133
Pyrethrum Insect Sprays	March	1946	129
Pyrethrum, Mosquito Spray, Activated	Jan.	1940	115
Pyrethrum, Mosquito Spray, Activated	Feb.	1944	117

Pyrethrum, OPA Order Permits Advances in Prices of Rotenone and	Aug.	1944	115
Pyrethrum, OPA Permits Advances in Rotenone and Prices	July	1944	131
Pyrethrum Powders, Antioxidants for	Nov.	1945	119
Pyrethrum Refunds Negotiated	Jan.	1947	123
Pyrethrum Supply Outlook	Jan.	1944	100
Pyrethrum Synergists	Feb.	1944	123

Q

Quaternaries, Practical Aspects of	Dec.	1947	130
Quaternaries vs. Phenolics I	Nov.	1947	125
Quaternaries vs. Phenolics II	Dec.	1947	157
Quaternary Ammonium Compounds, Testing the Germicidal Activity of	Sept.	1946	131
Quaternary Ammonium Compounds, Sources of Error in Germicidal Activity Tests with	April	1946	137
Quaternary Ammonium, Disinfectants	Mar.	1944	99
Quaternary Ammonium, Disinfectants	Mar.	1944	99
quiry into the Germicidal Performances of	Jan.	1946	125
Quaternary Ammonium Germicides	Aug.	1944	98
Quaternary Ammonium Sanitizers as used in the Dairy Industry, Testing	Aug.	1946	139
Quaternary Ammonium Testing, NAIDM- USDA Report on	Sept.	1947	123
Quaternary Ammonium Testing, NAIDM- USDA Report on	Sept.	1947	135
Quaternary Bactericides, A New Medium for Study of	Aug.	1947	119
Quaternary Ammonium Germicides	June	1947	145
Quaternary Ammoniums, Testing the	Nov.	1946	125
Quota Relief for Soap Makers	May	1946	41

R

Railroad Car Cleaning	June	1947	33
Rat Baits, Formulation of	Dec.	1943	127
Raticide, Red Squill as a	Nov.	1944	101
Rationing of Soap in England	June	1943	29
Rationing, Soap, in Britain	Dec.	1944	39
Raw Materials Handling in the Soap Plant	June	1947	73
Red Squill	June	1944	123
Red Squill as a Raticide	Nov.	1944	101
Red Squill, Fortified	July	1945	115
Refining Crude Glycerine	Feb.	1944	61
Repellent, Army Announces New Insect	Mar.	1944	129
Repellent "448," Present Status of	Nov.	1946	116
Repellents, Chigger	Nov.	1946	133
Repellents for Insects	Mar.	1943	103
Repellents, New Insect	Mar.	1947	124
Research in the Soap Plant	Mar.	1943	25
Revamping the F. D. A. Method	Apr.	1947	138
Rise in Tallow Forces Soap Price Advance	Apr.	1947	51
Roach Control, Sodium Fluoride Crayons for	Aug.	1943	107
Roach Control Tests	Feb.	1945	113
Roach Method, Modifications of the Liquid	Dec.	1945	159
Roach Powder	May	1946	131
Roach Powder Tests	Aug.	1946	157
Roach Powders	Feb.	1943	98
Roach Rearing and Testing	Apr.	1943	97
Roach Repellent Cement	Dec.	1945	151
Roach Repellent Cement	Apr.	1945	129
Roach Sprays, Testing of	July	1946	145
Roach, Synthetic, Powders	May	1944	102
Roach Testing, Liquid and Powder Methods for	June	1945	126
Roaches and Their Control	Sept.	1943	94
Rodenticides—Present and Future	Sept.	1945	117
Rosin	Nov.	1946	33
Rosin in Soap	Apr.	1943	21
Rosin in Soap, Evaluation of	Aug.	1943	57
Rosin, Modified	June	1946	43
Rosin Shortage, The	May	1945	32
Rosin Supplies	Nov.	1945	39
Rosin, The Market Outlook in	Aug.	1944	109
Rotenone Analysis	Nov.	1945	127
Rotenone Dust and Sprays	Apr.	1944	125
Rotenone Dust Mixtures, Effect of Oil in	June	1943	123

	Month	Year	Page
Rotenone, Latin America as a Source of.....	Sept.	1944	101
Rotenone, OPA Order Permits Advances in Prices of, and Pyrethrum.....	Aug.	1944	115
Rotenone, OPA Permits Advances in, and Pyre- thrum Prices	July, 1944	131	
Rotenone Situation	March, 1946	143	
Rotenone, The Effect of Plant Dispersants on the Toxicity of, in Ground Cubé When Used for Pea Aphid Control.....	Oct., 1944	121	
Rotenone, Toxicity of, to Animals.....	Oct., 1943	107	
Rug and Carpet Cleaners.....	Apr., 1945	71	
Rug and Upholstery Cleaners.....	May, 1944	25	
Rugs, Cleaners for Carpets, and Upholstery.....	Nov., 1944	33	

S

Sabadilla Insecticide Development	Sept., 1946	135
Saddle Soap Specification.....	Feb., 1943	65
Safe Floor Finish, What Is a.....	Oct., 1944	111
Safe Oils for Floors.....	Jan., 1944	103
Safer Handling of Economic Poisons.....	Dec., 1944	115
Sales Campaign, Planning for a.....	Dec., 1947	36
Sales Program, Soap.....	Sept., 1943	25
Salt Water Detergents.....	Jan., 1943	21
Salt Water Soap.....	Aug., 1944	61
Sanitary Supply Plant Layout, Comments on	June, 1947	118
Salvage, Fat	Jan., 1944	24
Sanitary Products, Marketing	June, 1945	131
Sanitary Products, The Poultry Market for.....	Sept., 1944	98
Sanitary Supply Dealer, Post War Outlook for the	July, 1944	127
Sanitation, Dishwashing	Aug., 1944	29
Sanitation in Cheese Factories, Discuss.....	Feb., 1947	147
Sanitation in Food Establishments.....	Jan., 1947	121
Sanitation, Industrial I	Apr., 1945	47
Sanitation, Industrial II	May, 1945	34
Sanitizing Dishes	Aug., 1946	130
Self Polishing Wax Films, Determining Tack of.....	Feb., 1947	126
Shampoo Formulation	Jan., 1946	61
Shampoos	Mar., 1946	36
Shampoos, Cream	April, 1946	36
Shave Products	Aug., 1946	46
Shoe Dressings, White.....	Mar., 1944	24
Silicates, Alkaline	Dec., 1947	38
Silver Polishes	Dec., 1944	63
Slip Testing of Waxes.....	Aug., 1946	42
Small Soap Maker, The I.....	Jan., 1944	102
Small Soap Maker, The (II).....	Mar., 1947	43
Small Soap Makers Demand End of WFO 42b Quotas	Apr., 1947	151
Small Soap Makers, The Future of the.....	Feb., 1946	49
Small Soap Makers, Charge Unfair Treatment of.....	Aug., 1945	33
Small Spray Chamber, Development and use of a.....	Dec., 1945	44
Soap Assn. Meets, Elects Wrisley.....	Apr., 1947	143
Soap Bar, Making A Divisible.....	Feb., 1947	41
Soap Builders, Comparison of.....	Nov., 1944	70
Soap Buying Habits	Dec., 1943	63
Soap Consumption in Hard Water.....	May, 1943	43
Soap Containers	Oct., 1946	48
Soap—Containing Synthetic Detergent.....	Jan., 1944	21
Soap Converters, USDA Moves to Investigate Sales of Soap to	Dec., 1945	41
Soap, Cracking of Toilet.....	Oct., 1946	41
Soap Cutback, Army Reports on.....	July, 1945	63
Soap, Defend Lard Release for.....	Dec., 1945	51
Soap, Development of a Germicidal I	Feb., 1944	43
Soap, Development of a Germicidal II	Mar., 1945	36
Soap Dispensers	Apr., 1945	50
Soap Drying Process, The Mazzoni.....	Dec., 1943	39
Soap Effect on Skin.....	May, 1947	38
Soap Expands Industrial Uses.....	Oct., 1943	69
Soap Export Control.....	Aug., 1947	37
Soap Fat and Oil Quotas.....	Aug., 1947	35
Soap Fat Use Drops Further.....	Feb., 1946	36
Soap Finishing Devices, Survey of.....	Feb., 1946	51
Soap Flake Equipment.....	Sept., 1944	61
Soap for Men.....	Feb., 1943	57
Soap Formula Changes.....	July, 1943	21
Soap Granules, Coating.....	Nov., 1943	25
Soap in Dentifrices	Oct., 1943	65
Soap in Medicine.....	Jan., 1945	55
Soap Industry, British.....	July, 1944	29
Soap Industry Meeting.....	May, 1947	33
Soap Industry Meetings.....	Feb., 1944	25
Soap Industry Meets.....	Feb., 1945	36
Soap Industry, Postwar Outlook for the British	Jan., 1947	43
Soap Industry, What's Ahead for.....	Feb., 1946	33
Soap Irritation, Pros and Cons of Toilet.....	June, 1945	139
Soap Kettle, Experimental.....	Sept., 1945	33
Soap Makers, A Review of Recent Legal Decisions Affecting	May, 1945	25
Soap Making at Port Sunlight.....	Feb., 1943	59
Soap Making In Brazil	Sept., 1944	32
Soap Making in the Pacific.....	Apr., 1947	41
Soap Making, New, Processes.....	Oct., 1946	46
Soap Making Raw Materials, Sources in the Americas for	Mar., 1946	38
Soap Making, Theory of.....	Sept., 1944	25
Soap Manufacture, Rapid.....	Sept., 1945	36
Soap Manufacture of Liquid.....	Aug., 1945	40
Soap Market Survey	Apr., 1943	28
Soap, Metallic	Feb., 1943	21
Soap Output, 1942 and 1943.....	June, 1946	83
Soap Output Faces Cut in 1943.....	May, 1943	21
Soap Perfumes	Dec., 1945	67
Soap Perfuming	July, 1945	33
Soap Perfuming, Trends in Toilet.....	Sept., 1945	47
Soap Plant in Hawaii, New.....	Nov., 1945	29
Soap Plant Layout	July, 1944	63
Soap Plodding	Dec., 1944	33
Soap, Post War, Outlook.....	Mar., 1944	30
Soap, Potash, Questions.....	Mar., 1944	29
Soap, Potash, Situation	Jan., 1943	58
Soap Powder Methods	Aug., 1946	79
Soap Problems, the Army's.....	Apr., 1946	41
Soap Production, Toilet.....	Sept., 1943	32
Soap Process, Fatty Acid.....	Sept., 1944	39
Soap Purchases, Review Government.....	Apr. 2-5, Request.....	Apr., 1946
Soap Quota Changes At Washington Hearings Apr. 2-5, Request.....	Oct., 1943	25
Soap Quotas Increased	Aug., 1945	47
Soap Rationing Planned—USDA Orders Use of Builders to Extend Short Soap Supply, Deny.....	Dec., 1944	39
Soap Rationing in Britain.....	Feb., 1945	38
Soap Record for 1945 Reviewed by E. H. Little.....	Apr., 1944	39
Soap, Revise Army Specifications for All- Purpose	Sept., 1943	25
Soap Sales Program	Aug., 1944	61
Soap, Salt Water	Jan., 1943	21
Soap Scrap, Re-use of.....	Sept., 1945	63
Soap Shampoos, Modern	July, 1946	45
Soap Shortage	Oct., 1946	54
Soap Shortage Grows More Acute.....	July, 1943	25
Soap, Specification for Army All-purpose.....	June, 1945	50
Soap Specifications Proposed Revision of U. S. Hand	Apr., 1944	65
Soap, Speeding Up, Making.....	Oct., 1946	75
Soap Substitutes, German	May, 1944	28
Soap Supply Outlook	June, 1944	29
Soap, Tall Oil in.....	April, 1946	75
Soap Vs. Synthetics	Aug., 1946	75
Soap Washing, Counter Current.....	Feb., 1944	37
Soap Year in Review.....	Nov., 1947	51
Soaps at Safety Conference.....	Oct., 1943	69
Soaps, Cold Process	Oct., 1947	41
Soaps, Detergents and Metal Cleaners at New York A.C.S. Meeting, Discuss.....	Dec., 1944	36
Soaps, Dry Cleaning	July, 1946	48
Soaps, Fats and Oils Discussed as American Oil Chemists Society Meets in Chicago, Oct. 30-Nov. 1	Nov., 1946	38
Soaps for Insecticide Use.....	Nov., 1944	63
Soaps in Organic Solvents.....	Sept., 1946	67

	Month	Year	Page
Soaps in the Sanitary Chemicals Supply			
Field	Dec.,	1947	33
Soaps, Liquid Toilet	Apr.,	1944	29
Soaps, Medicated	Oct.,	1944	33
Soaps, Newer Industrial Uses for	Aug.,	1944	25
Soaps, Novelty	Mar.,	1947	33
Soaps, Potash	Feb.,	1944	30
Soaps, Refined Tall Oil in	Oct.,	1944	37
Soaps, The Market for Better Grade Toilet	Dec.,	1944	31
Sodium Fluoride Crayons	Aug.,	1943	107
Sodium Hydroxide, Effect on Soap	Nov.,	1943	63
Sodium Hydroxide on Dissolved Soap, Effect of	Mar.,	1945	42
Sodium Phosphates, Use and Distribution	Aug.,	1944	32
Solvent Power of Detergents	Oct.,	1944	63
Solvents, Chlorinated Dry Cleaning	Mar.,	1944	57
Solvents for DDT	Nov.,	1945	110
Solving a Production Problem in Automatic Soap Flake Packaging	Sept.,	1947	38
Sources of Error in Germicidal Activity Tests with Quaternary Ammonium Compounds	Apr.,	1946	137
South America Develops Aromatic Industry	July,	1944	47
Specification for Dishwashing Compound, Propose New	May,	1947	36
Specifications, Revise Army, for All-Purpose Soap	Apr.,	1944	39
Sprayer for Testing Aerosols, New	July,	1945	117
Speeding Up Soap Making	Apr.,	1944	65
Spray, Activated Pyrethrum Mosquito	Feb.,	1944	117
Spray Process for Soaps	Jan.,	1946	29
Sprayers for Dispersing Concentrated Insecticides	June,	1946	149
Sprays, Concentrated	April,	1946	145
Sprays, Livestock	Aug.,	1946	135
Sprays, Rotenone Dust and	Apr.,	1944	125
Squill, Red	June,	1944	123
Squill, Red, as a Raticide	Nov.,	1944	101
Stability of Aerosol Formulations	Nov.,	1947	116
Stability Tests for Emulsion Waxes	May,	1945	105
Stain Removal, Leather	Jan.,	1943	61
Stain Removers	March,	1946	33
Stanco Laboratory, Camera View of	Nov.,	1944	98
Stove Polishes	Mar.,	1947	133
Study of Laundering Factors	June,	1946	79
Styrax Oil	Oct.,	1943	30
Sulfonates, Alkyl Aryl	Dec.,	1946	46
Surface Active Agents	Dec.,	1943	25
	Jan.,	1944	28
Surface-Active Cations, Properties and uses of	Mar.,	1947	39
Surface Activity, Nature of	Feb.,	1946	67
Survey of a Typical Soap Market	July,	1946	42
Sweeping Compounds, Floor Oils and	Jan.,	1946	32
Synergistic Action of Piperonylamides	Apr.,	1943	105
Synergists, Pyrethrum	Feb.,	1944	123
Synergists, Study New	May,	1943	111
Synthetic Chemicals in the Textile Industry	Sept.,	1947	40
Synthetic Detergents	Aug.,	1943	23
	Sept.,	1943	29
	Oct.,	1943	27
	Nov.,	1943	31
	Dec.,	1943	25
Synthetic Detergents I	Mar.,	1947	37
Synthetic Detergents II	Apr.,	1947	45
Synthetic Detergents, Evaluation of	May,	1947	69
Synthetic Detergents for Washing City Streets	Dec.,	1947	42
Synthetic Detergents, History of	July,	1943	30
Synthetic Detergents, Potash Soaps vs.	May,	1946	43
Synthetic Detergents in the Modern Tannery	May,	1946	46
Synthetic Detergents vs. Soap	Sept.,	1946	37
Synthetics, Applications of	July,	1946	75
Synthetic Fats, German	Aug.,	1947	69
Synthetic Insecticides, Newer	June,	1947	127

T

Tack of Self Polishing Wax Films, De-termining	Feb.,	1947	126
Tall Oil	Aug.,	1945	36
Tall Oil in Soap	June,	1944	29
	May,	1943	24
Tall Oil, Refined, in Soaps	Oct.,	1944	37
Tallow—What Next	Nov.,	1947	42
Test Method for Commercial Aerosol Dispensers, A	Sept.,	1947	119
Testing, Disinfectant, Errors	Mar.,	1944	111
Testing Disinfectants, Postwar Problems in	Mar.,	1947	129
Testing Insecticidal Residues	Oct.,	1947	124
Testing Insecticide Residues	June,	1947	139
Testing, Insecticides	June,	1944	114
	July,	1944	123
Testing of Roach Sprays	July,	1946	145
Testing of Waxes, Slip	Jan.,	1944	102
Testing, Pine Disinfectant	Dec.,	1944	141
Testing the Germicidal Activity of Quaternary Ammonium Compounds	Sept.,	1946	131
Testing the Quaternary Ammoniums	Nov.,	1946	125
Testing Quaternary Ammonium Sanitizers as used in the Dairy Industry	Sept.,	1947	123
T. G. A. Holds Annual Meeting	June,	1947	41
T.G.A. Meets, Elects Paul Douglas	June,	1946	47
Thiocyanate Patent, Decide	Aug.,	1946	169
Thiocyanates for Pea Aphid Control	Feb.,	1943	105
Toilet Goods, Raw Material Outlook for the, Industry	June,	1944	37
Toilet Soap Production	April,	1946	41
Toilet Soap Production, Some Practical Notes on	April,	1946	41
Toilet Soaps, Liquid	Apr.,	1944	29
Toilet Soaps, The Market for Better Grade	Dec.,	1944	41
Toothpaste Market	May,	1943	29
Toxicity, Aerosol	June,	1946	157
Toxicity Data on Piperonyl Cyclo-Hexanone	June,	1947	163
Toxicity of Aerosols	Sept.,	1946	127
Toxicity of DDT	July,	1946	135
Toxicity of DDT Sprays to Livestock	Sept.,	1946	124
Toxicity of DDT, The Residual	Dec.,	1945	141
Toxicity Studies, Insecticide	Nov.,	1945	117
Toxicity Studies on Insecticides	Feb.,	1944	107
Triethylene Glycol for Air Sterilization	June,	1947	133

U

Upholstery, Cleaners for Carpets, Rugs and	Nov.,	1944	25
Upholstery Cleaners, Rug and	May,	1944	25
U. S. D. A. Recommendations on DDT Use	June,	1947	163

W

Wages, Law on	Mar.,	1943	22
Wallpaper Cleaners, Paint and	Dec.,	1945	37
Washroom Sanitation Specialties	Oct.,	1947	139
Water Softeners	Nov.,	1945	32
Wax Dispersions, The Electron Microscope Studies Bright-drying	Aug.,	1947	131
Wax Floor Polishes	Sept.,	1945	39
Wax Supplies	Apr.,	1944	113
Waxes, Sampling Mixed	May,	1944	59
Waxes, Slip Testing of	Jan.,	1944	102
Weed Killers, Chemical	July,	1945	104
West Disinfecting	Sept.,	1947	35
Wetting Agents in the Modern Tannery	Nov.,	1946	45
WFO 42b	Oct.,	1946	50
WFO 42b Being Revised	Sept.,	1946	55
What's Ahead for Insecticides	June,	1947	135
White Shoe Dressings	Dec.,	1947	38

**Association of American
Soap and Glycerine Producers, Inc.**

295 Madison Ave., New York 17

Murray Hill 6-3662

OFFICERS

GEORGE A. WRISLEY, Allen B. Wrisley Co.....*President*
E. H. LITTLE, Colgate-Palmolive-Peet Co.....*Vice-President for Eastern States*
E. A. MOSS, Swift & Co.....*Vice-President for Central States*
E. M. FINEHOUT, Los Angeles Soap Co.....*Vice-President for Western States*
N. S. DAHL, John T. Stanley Co.....*Treasurer*
H. F. ELBERFELD, Colgate-Palmolive-Peet Co.....*Assistant Treasurer*
J. M. MILLER*Acting Secretary*

BOARD OF DIRECTORS

N. S. DAHL, John T. Stanley Co., New York	C. LUCKMAN, Lever Bros. Co., Cambridge
R. R. DEUPREE, Procter & Gamble Co., Cincinnati	E. A. MOSS, Swift & Co., Chicago
L. J. EVANS, Iowa Soap Co., Burlington	M. MUNDHEIM, Lightfoot Schultz Co., New York,
E. M. FINEHOUT, Los Angeles Soap Co., Los Angeles	N. Y.
D. M. FLICK, Armour & Co., Chicago	C. D. POLAND, Poland Soap Works, Anniston,
G. R. FULTON, Beach Soap Co., Lawrence, Mass.	Ala.
V. LEVINSON, J. Eavenson & Sons, Camden, N. J.	W. F. STRAUB, Antiseptol Co., Chicago
E. H. LITTLE, Colgate-Palmolive-Peet Co., Jersey City, N. J.	G. A. WRISLEY, Allen B. Wrisley Co., Chicago
	R. H. YOUNG, Davies Young Soap Co., Dayton

Soap and Detergent Manufacturers Association

723 15th St., N.W., Washington, D. C.

OFFICERS

HERBERT KRANICH, Kranich Soap Co.....*President*
B. R. FREUDENTHAL, Chemical Service Co. of Baltimore....*Eastern Vice-President*
E. O. GILLAM, Gillam Soap Works.....*Western Vice-President*
CHARLES B. SOLLY, Harley Soap Co.....*Treasurer*
ANDREW FEDERLINE*Executive Secretary*

DIRECTORS

A. ROY ALLISON, Stevens Grease & Oil Co., Cleveland
DUDLEY J. BACHRACH, Clifton Chemical Co., New York
W. B. EDDY, Rochester Germicide Co., Rochester, N. Y.
VERN W. HAAG, Haag Laboratories, Inc., Blue Island, Ill.
W. R. MARKLAND, John H. Breck, Inc., Springfield, Mass.
A. G. PECK, Peck's Products Co., St. Louis
FRANK J. POLLNOW, Jr., Vestal, Inc., St. Louis
ALBERT SELIG, The Selig Co., Atlanta
GEORGE L. SIMMONDS, U. S. Sanitary Specialties Corp., Chicago
DR. VLADIMIR TUMA, Buckingham Wax Co., Long Island City, N. Y.
H. W. ZUSSMAN, Alrose Chemical Co., Providence, R. I.

**National Association of
Insecticide and Disinfectant Manufacturers**

110 East 42nd St., New York

OFFICERS

GORDON M. BAIRD, Baird & McGuire, Inc., Holbrook, Mass.....*President*
L. J. OPPENHEIMER, West Disinfecting Co., Long Island City, N. Y.....*First Vice-President*
C. L. WEIRICH, C. B. Dolge Co., Westport, Conn.....*Second Vice-President*
JOHN POWELL, John Powell & Co., New York.....*Treasurer*
H. W. HAMILTON, H. W. Hamilton Co., Inc., New York.....*Secretary*
MRS. E. D. SULLIVAN.....*Executive Secretary*

BOARD OF GOVERNORS

MELVIN FULD, Fuld Bros. Co., Baltimore
N. J. GOTHARD, Sinclair Refining Co., East Chicago, Ind.
PRESTON B. HELLER, B. Heller & Co., Chicago
D. F. MURPHY, Rohm & Haas Co., Philadelphia
H. A. NELSON, Chemical Supply Co., Cleveland
PAUL ROBBINS, Geo. B. Robbins Disinfectant Co., Cambridge, Mass.
J. C. VARLEY, James Varley & Sons, St. Louis
ROBERT C. WHITE, JR., Robert C. White Co., Philadelphia
HOWARD F. WILLIAMS, J. R. Watkins Co., Winona, Minn.

Drug, Chemical and Allied Trades Section

New York Board of Trade, Inc.
291 Broadway, New York 7, N. Y.

Fred J. Stock, Chas. Pfizer & Co., Inc.....*Chairman*
Robert B. Magnus, Magnus, Mabey & Reynard, Inc.....*Vice Chairman*
Hugh S. Crosson, McKesson & Robbins, Inc.....*Treasurer*
Carl M. Anderson, Merck & Co., Inc.....*Counsel*
Helen L. Booth.....*Secretary*

EXECUTIVE COMMITTEE

William T. Allen
Stanley I. Clark, Sterling Drug, Inc.
James DeCesare, White Laboratories, Inc.
F. S. Dieterich, The Mennen Company
James G. Flanagan, S. B. Penick & Company
Russel J. Fosbinder, The Maltbie Chemical Company
Harold C. Green, L. Sonneborn Sons, Inc.
Robert L. Hutchins, Commercial Solvents Corp.
Charles M. Macauley, Pro-phy-lac-tic Brush Co.
John P. Remensnyder, Heyden Chemical Corp.
Clark L. Rodgers, Owens-Illinois Glass Company
E. L. Shattuck, Abbott Laboratories
Fred G. Singer, E. I. duPont de Nemours & Co., Inc.
Gerald L. Smith, American Home Products Corp.
Lloyd I. Volckening, The Ivers-Lee Company
Charles P. Walker, Jr., Citro Chemical Company

ADVISORY COUNCIL

Carle M. Bigelow, Calco Chemical Division
American Cyanamid Co.
Harold M. Altshul, Ketchum & Co., Inc.
Guy L. Marsters, The Norwich Pharmacal Co.
E. T. T. Williams, Lambert Pharmacal Co.
Victor E. Williams, Monsanto Chemical Co.

Washington Representative
Carson Gray Frailey
720 Albee Building

Agricultural Insecticide & Fungicide Association

285 Madison Ave., New York 17, N. Y.

OFFICERS

GEORGE F. LEONARD, Tobacco By-Products and Chemical Corp., Louisville... *Pres.*

LEA S. HITCHNER..... *Executive Secretary-Treasurer*

DIRECTORS

Above officers are members of the board. Also:

W. C. BENNETT, Phelps Dodge Refining Corp., New York

J. HALLAM BOYD, Commercial Chemical Co., Memphis 1, Tenn.

ERNEST HART, Niagara Sprayer & Chemical Div., Food Machinery Corp., Middleport, N. Y.

HOWARD P. MANSFIELD, Grasselli Chemicals Dept., E. I. du Pont de Nemours & Co., Wilmington 98, Del.

JAMES MCCONNON, McConnon & Co., Winona, Minn.

A. W. MOHR, California Spray Chemical Corp., Richmond, Calif.

E. H. PHILLIPS, G.L.F. Soil-Building Service, Ithaca, N. Y.

GEORGE R. RINKE, John Powell & Co., New York

FRED SHANEMAN, Pennsylvania Salt Mfg. Co., Philadelphia

F. S. WASHBURN, American Cyanamid Co., New York

BYRON P. WEBSTER, Chipman Chemical Co., Bound Brook, N. J.

H. DE WITT WHITTLESEY, The Sherwin-Williams Co., Cleveland, O.

F. W. WIEDER, Stauffer Chemical Co., San Francisco

The Toilet Goods Association, Inc.

9 Rockefeller Plaza, New York

OFFICERS

Paul H. Douglas, Bourjois, Inc..... *President*

H. J. Lehman, Wildroot Co..... *Vice-President*

Norman F. Dahl, Prince Matchabelli, Inc..... *Vice-President*

John A. Ewald, Avon Allied Products, Inc..... *Vice-President*

H. P. Willats, Colonial Dames, Inc..... *Vice-President*

Joseph Keho, Dorothy Gray, Ltd..... *Secretary*

Richard Stern, Ferd Mulhens, Inc..... *Treasurer*

Paul F. Vallee..... *Honorary Treasurer*

S. L. Mayham..... *Executive Vice-President*

H. D. Goulden..... *Director of Scientific Research & Standards*

Hugo Mock..... *Counsel*

Gail B. Selig..... *Associate Counsel*

Henry Etach..... *Assistant Secretary*

BOARD OF DIRECTORS

Herman L. Brooks..... *Honorary Chairman*

C. M. Baker..... Pond's Extract Co.

A. H. Bergmann..... Oxzyn Co.

Philip Blazer..... Marcelle Cosmetics, Inc.

William F. Denney, Jr..... Denney & Denney

Davis Factor..... Max Factor & Co.

C. W. Godefroy..... Godefroy Mfg. Co.

Joseph P. Hardie..... Bristol-Myers Co.

Joseph A. Huisking..... Fritzsche Brothers, Inc.

E. B. Hurlburt..... The J. B. Williams Co.

William Jacobs..... George W. Button Co.

J. M. Jaffin..... Universal Laboratories, Inc.

A. E. Johnston..... Colgate-Palmolive-Peet Co.

F. N. Langlois..... Rexall Drug Co.

J. H. McShane..... Pacquin, Inc.

Wrisley B. Oleson..... Allen B. Wrisley Dist. Co.

J. C. Ozier..... Plough, Inc.

C. A. Pennock..... Hudnut Sales Co., Inc.

G. A. Pfeiffer..... Richard Hudnut

J. I. Poses..... A. A. Vantine Products Corp.

Joseph Revson..... Revlon Products Corp.

Richard Salomon..... Charles of the Ritz, Inc.

Cecil Smith..... Yardley of London, Inc.

Karl Voss..... Karl Voss Corp.

Northam Warren..... Northam Warren Corp.

H. Gregory Thomas..... *Honorary Member*

**National Sanitary Supply Association
(Incorporated)**

139 North Clark Street, Chicago 2, Illinois

OFFICERS

LEO. G. PECK, Peck's Products Co., St. Louis, Mo. (Mfr.).....*President*
CARL B. LIEN, Lien Chemical Co., Chicago, Ill. (Dist.).....*Vice-President*
LEO J. KELLY, National Sanitary Supply Association, 139 North Clark St.,
Chicago 2, Ill.*Executive Vice-President*
DONALD F. PEATEE, The Mellocraft Co., Toledo, Ohio (Dist.).....*Treasurer*
MARTIN PETERS, Moore Brothers, Co., New York, N. Y. (Mfr.).....*Secretary*

REGIONAL VICE PRESIDENTS

JACK GANTZ, Empire Brush Co., Port Chester, N. Y. (Mfr.).....*East*
AUGUSTUS MIERSON, Mierson Products Co., San Francisco, Calif. (Mfr.)....*West*
CHAS. S. BUSCHART, U-San-O Corp., St. Louis, Mo. (Dist.).....*Central*
ERWIN ZABAN, Zep Mfg. Co., Atlanta, Ga. (Mfr.).....*South*

BOARD OF DIRECTORS

JULES LOVINGER, Lovinger Disinfectant Co., Salt Lake City, Utah (Dist.)
E. H. PAULL, United Janitor Supply Co., Seattle, Wash. (Dist.)
HENRY M. HUNTER, Paint Warehouse & Chemical Co., San Antonio, Tex. (Dist.)
HENRY B. QUICK, Multi-Clean Products, Inc., St. Paul, Minn. (Mfr.)
ROBERT L. COOLEY, White Mop Wringer Co., Fultonville, N. Y. (Mfr.)

The Essential Oil Association of U. S. A.

220 Fifth Ave., New York City

OFFICERS

WILLIAM SCHILLING, JR., Norda Essential Oil & Chemical Co.....*President*
H. P. WESEMANN, Fritzsche Bros., Inc.*Vice-President*
ROBERT B. MAGNUS, Magnus, Mabee & Reynard, Inc.....*Secretary-Treasurer*
RAY C. SCHLOTTERER*Managing Director*

EXECUTIVE COMMITTEE

FREDERICK G. BUEHLER, George Lueders and Company, Inc.
GERARD J. DANCO, Gerard J. Danco, Inc.
VAL H. FISCHER, Dodge & Olcott Co.
F. K. GOUDSMIT, Van Ameringen-Haebler, Inc.
DR. E. C. KUNZ, Givaudan-Delawanna, Inc.
G. R. NOTTINGHAM, E. I. du Pont de Nemours & Co., Inc.

National Pest Control Association, Inc.
Office of the Secretary
3019 Ft. Hamilton Parkway, Brooklyn

GEORGE L. HOCKENYOS, Sentinel Insect Control Lab., Springfield, Ill.....*President*
H. O. ABEL, Abel Exterminating Co., Dallas, Tex.....*Vice-President*
WILLIAM Q. PHIPPARD, Wilmar, Inc., Cincinnati, O.....*Vice-President*
HAROLD E. JENNINGS, Smithereen Co., Chicago, Ill.....*Vice-President*
SIDNEY WIMMER, Majestic Exterminating Co., New York.....*Vice-President*
WALTER A. HELMS, Orkin Exterminating Co., Jacksonville, Fla.....*Vice-President*
D. C. TRACY, Golden State Term. & Pest Cont., Los Angeles, Calif.....*Vice-President*
WILLIAM O. BUETTNER, Buettner Pest Control Co., Brooklyn, N. Y.....*Secretary*
ROBERT C. YEAGER, Rose Exterminator Co., Cincinnati, O.....*Treasurer*

DIRECTORS

1947-1950

E. R. JENNINGS, Guaranteed Sanitation, Inc., New York
HARVEY W. KLEIN, Klein Exterminating Co., Milwaukee
M. H. USHER, City Sanitary Ext. Co., Lincoln, Neb.
J. EDWIN SAMETH, Western Ext. Co., Inc., Newark, N. J.
E. A. F. KUNTZ, Lien Chemical Co., Chicago
W. B. HILL, Hill Termite Control Systems, Memphis
RAY M. DEWEY, Dewey Prod. & Svc. Co., Los Angeles

1947-1949

I. B. CARNCROSS, Syracuse Chemical Co., Syracuse
CHARLES C. DELK, Delk Pest Control Co., Fresno, Cal.
CHARLES DENNY, Charles Denny Co., St. Louis
LOUIS GATTO, Gatto Pest Control Co., Beaver Falls

JACQUES J. HESS, Exterminating Services Co., New York
CHARLES PARTLOW, Reliable Exterminating Co., Lafayette, Ind.
MARK WEINTRAUB, Astor Exterminating Co., Boston

1947-1948

JEROME L. HOWELL, Howell Termite Control Co., Houston
ALBERT M. AKERS, Rose Exterminator Co., Cleveland
W. W. SCOTT, Arwell, Inc., Waukegan, Ill.
MARTIN T. MEYER, Theodore Meyer, Est., Phila.
GEORGE G. AITKENHEAD, N. & T. Chemical Co., San Francisco
GEORGE HEMMERT, Safe-Way Exterminating Co., Detroit
HERBERT MEYER, Fumex Sanitation Co., Jamaica, N. Y.

**Salesmen's Association of the
American Chemical Industry**

OFFICERS

JAMES G. PARK, Enjay Co.....*President*
ALFRED T. LOEFFLER, Monsanto Chemical Co.....*Vice-President*
PAUL W. HILLER, Innis Speiden & Co.....*Secretary*
CHARLES V. DOUGLAS, Diamond Alkali Sales Corp.....*Treasurer*

DIRECTORS

EDWARD A. BUSH, Bush Aromatics, Inc. ROBERT J. MILANO, Millmaster Chemical Co.
HAROLD C. GREEN, L. Sonneborn & Sons LEON W. MILLER, Barrett Div., Allied Chemical & Dye Corp.
R. L. HUTCHINS, Commercial Solvents Corp. GEORGE W. POLAND, Stauffer Chemical Co.

Ex-Officio

JAMES E. FERRIS, Niagara Alkali Co.

DEFINITIONS

(From Page 214)

present case, strength, time of contact, type of organism, etc.), due regard should always be had to these factors as they occur, or are likely to occur, in actual practice.

INSECTICIDE ACT

(From Page 173)

effect that the article was lawfully registered at the time of sale and delivery to him, and that it complies with the other requirements of this Act, designating this Act. In such case the guarantor shall be subject to the penalties which would otherwise attach to the person holding the guaranty under the provisions of this Act;

(2) any carrier while lawfully engaged in transporting an economic poison or device if such carrier upon request by a person duly designated by the Secretary shall permit such person to copy all records showing the transactions in and movement of the articles;

(3) to public officials while engaged in the performance of their official duties;

(4) to the manufacturer or shipper of an economic poison for experimental use only by or under the supervision of any Federal or State agency authorized by law to conduct research in the field of economic poisons; or by others if a permit has been obtained before shipment in accordance with regulations promulgated by the Secretary.

PENALTIES

SEC. 8. a. Any person violating section 3a (1) of this Act shall be guilty of a misdemeanor and shall on conviction be fined not more than \$1,000.

b. Any person violating any provision other than section 3a (1) of this Act shall be guilty of a misdemeanor and shall upon conviction be fined not more than \$500 for the first offense, and on conviction for each subsequent offense be fined not more than \$1,000 or imprisoned for not more than one year, or both such fine and imprisonment: *Provided*, That an offense committed more than five years after the last previous conviction shall be considered a first offense: *And provided further*, That in any case where a registrant was issued a warning by the Secretary pursuant to the provisions of section 4c of this Act, he shall in each instance upon conviction for an offense concerning which he had been

so warned, be fined not more than \$1,000 or imprisoned for not more than one year, or both such fine and imprisonment; and the registration of the article with reference to which the violation occurred shall terminate automatically. An article the registration of which has been terminated may not again be registered unless the article, its labeling, and other material required to be submitted appear to the Secretary to comply with all the requirements of this Act.

c. Notwithstanding any other provision of this section, in case any person, with intent to defraud, uses or reveals information relative to formulas of products acquired under the authority of section 4 of this Act, he shall be fined not more than \$10,000 or imprisoned for not more than three years, or both such fine and imprisonment.

d. When construing and enforcing the provisions of this Act, the act, omission, or failure, of any officer, agent, or other person acting for or employed by any person shall in every case be also deemed to be the act, omission, or failure of such persons as well as that of the person employed.

SEIZURES

SEC. 9. a. Any economic poison or device that is being transported from one State, Territory, or District to another, or having been transported, remains unsold or in original unbroken packages, or that is sold or offered for sale in the District of Columbia or any Territory, or that is imported from a foreign country, shall be liable to be proceeded against in any district court of the United States in the district where it is found and seized for confiscation by a process of libel for condemnation—

(1) in the case of an economic poison—

(a) if it is adulterated or misbranded;

(b) if it has not been registered pursuant to the provisions of section 4 of this Act;

(c) if it fails to bear on its label the information required by this Act; or

(d) if it is a white powder economic poison and is not colored as required under this Act; or

(2) in the case of a device if it is misbranded,

b. If the article is condemned, it shall, after entry of the decree, be disposed of by destruction or sale as the court may direct and the proceeds, if sold, less the legal costs, shall be paid into the Treasury of the United States, but the article shall not be sold contrary to the provisions of this Act or of the laws of the jurisdiction in which it is sold: *Provided*, That upon the payment of the costs of the libel proceedings and the execution and delivery of a good and sufficient bond conditioned that the article shall not be sold or otherwise disposed of contrary to

the provisions of this Act or the laws of any State, Territory, or District in which sold, the court may direct that such articles be delivered to the owner thereof. The proceedings of such libel cases shall conform, as near as may be, to the proceedings in admiralty, except that either party may demand trial by jury of any issue of fact joined in any case, and all such proceedings shall be at the suit of and in the name of the United States.

c. When a decree of condemnation is entered against the article, court costs and fees, storage, and other proper expenses shall be awarded against the person, if any, intervening as claimant of the article.

IMPORTS

SEC. 10. The Secretary of the Treasury shall notify the Secretary of Agriculture of the arrival of economic poisons and devices offered for importation and shall deliver to the Secretary of Agriculture, upon his request, samples of economic poisons or devices which are being imported or offered for import into the United States, giving notice to the owner or consignee, who may appear before the Secretary of Agriculture and have the right to introduce testimony. If it appears from the examination of a sample that it is adulterated, or misbranded or otherwise violates the prohibitions set forth in this Act, or is otherwise dangerous to the health of the people of the United States, or is of a kind forbidden entry into or forbidden to be sold or restricted in sale in the country in which it is made or from which it is exported, the said article may be refused admission, and the Secretary of the Treasury shall refuse delivery to the consignee and shall cause the destruction of any goods refused delivery which shall not be exported by the consignee within three months from the date of notice of such refusal under such regulations as the Secretary of the Treasury may prescribe: *Provided*, That the Secretary of the Treasury may deliver to the consignee such goods pending examination and decision in the matter on execution of a penal bond for the amount of the full invoice value of such goods, together with the duty thereon, and on refusal to return such goods for any cause to the custody of the Secretary of the Treasury when demanded, for the purpose of excluding them from the country, or for any other purpose, said consignee shall forfeit the full amount of the bond: *And provided further*, That all charges for storage, cartage, and labor on goods which are refused admission or delivery shall be paid by the owner or consignee, and in default of such payment shall constitute a lien against any future importation made by such owner or consignee.

DELEGATION OF DUTIES

SEC. 11. All authority vested in the Secretary by virtue of the provisions of this Act may with like force and effect be executed by such employees of the United States Department of Agriculture as the Secretary may designate for the purpose.

AUTHORIZATION FOR APPROPRIATIONS
AND EXPENDITURES

SEC. 12. a. There is hereby authorized to be appropriated, out of any moneys in the Treasury not otherwise appropriated, such sums as may be necessary for the purposes and administration of this Act. In order to carry out the provisions of this Act, which take effect prior to the repeal of the Insecticide Act of 1910, appropriations available for the enforcement of such Act are authorized to be made available.

b. The Secretary is authorized from the funds appropriated for this Act to make such expenditures as he deems necessary, including rents, travel, supplies, books, samples, testing devices, furniture, equipment, and such other expenses as may be necessary to the administration of this Act.

COOPERATION

SEC. 13. The Secretary is authorized to cooperate with any other department or agency of the Federal Government and with the official agricultural or other regulatory agency of any State, or any State, Territory, District, possession, or any political subdivision thereof, in carrying out the provisions of this Act, and in securing uniformity of regulations.

SEPARABILITY

SEC. 14. If any provision of this Act is declared unconstitutional, or the applicability thereof to any person or circumstance is held invalid, the constitutionality of the remainder of this Act and the applicability thereof to other persons and circumstances shall not be affected thereby.

EFFECTIVE DATE

SEC. 15. All provisions of this Act, except section 3, "Prohibited Acts"; section 8, "Penalties"; section 9, "Seizures"; and section 10, "Imports," shall take effect upon enactment, and sections 3, 8, 9, and 10 of this Act shall take effect as follows: (1) As to devices, upon enactment; (2) as to rodenticides and herbicides, six months after enactment; and (3) as to insecticides, fungicides, and all other economic poisons, one year after enactment: *Provided*, That the Secretary, upon application, may at any time within one year after sections 3, 8, 9, and 10 of this Act become applicable to devices, rodenticides and herbicides, and insecticides, fungicides, and other economic poisons, respectively, if he determines that such action will not be unduly detrimental to the public interest, and is necessary to avoid hardship, exempt, under such terms and conditions as he may prescribe, any economic poison from the provisions of this Act if such economic poison was labeled, shipped, and delivered by the manufacturer thereof prior to the time the sections of this Act referred to above become applicable to such economic poison and in case the economic poison is an insecticide or fungicide if its sale, delivery, or shipment has not been and will not be in violation of the provisions of the Insecticide Act of 1910.

REPEALS

SEC. The Insecticide Act of 1910, approved April 26, 1910 (36 Stat. 331, 7 U. S. C. 121-134), is hereby repealed one year after the date of the enactment of this Act: *Provided*, That, with respect to violations, liabilities incurred, or appeals taken prior to said date, and with respect to sales, shipments, or deliveries of insecticides and fungicides under an exemption granted by the Secretary under section 15, all provisions of the Insecticide Act of 1910 shall be deemed to remain in full force for the purpose of sustaining any proper suit, action, or other proceeding with respect to any such violations, liabilities, appeals, or to such sales, shipments, or deliveries of insecticides and fungicides exempted by the Secretary under section 15.

Approved June 25, 1947.

FAT SALVAGE
(From Page 159)

interchangeability of fats and oils is important to the national economy has been pointed out by Charles E. Lund: "This reclamation of used fats—between 100 and 200 million pounds a year . . . reduces the possible use of lard with its resultant increased demand for vegetable oils to meet foreign and domestic needs."

Government solidly backs the Fat Salvage program, but what of industry who puts up the money—\$7,035,418 for advertising as of the first of this year? The first answer to the question of industry's stake in fat salvage goes back to March, 1942, when the Salvage Division of the War Production Board invited a number of soap manufacturers and renderers to Washington. Vice-Chairman Paul Cabot conducted the meeting and advised that the U. S. was about to suffer an acute shortage of fats and oils. Soon after, the initial fat salvage campaign was launched with heavy advertising and although it was expected to run for only six weeks, it is still going strong and will as long as the world-wide shortage of fats and oils exists.

The cost to industry for the campaign has averaged 83/100ths of a cent per pound from the period of March 1942 through 1947. The 83/100ths of a cent per pound is the premium industry has paid to buy

the additional 864,318,000 pounds of refined kitchen fats from renderers in the open market.

Collection figures fluctuated a good deal in accordance with wartime conditions and continue to do so in the postwar months. There have been four peaks in the fat salvage campaign: these occurred in May, 1944 when the Office of Price Administration instituted points for fats; in March, 1945 when the ration point bonus was doubled; in April, 1946 during the acute soap shortage and in May, 1947 when, with controls lifted, meat dealers upped prices paid for used fats.

Interestingly, these collection increases occurred when personal benefits to salvagers were enhanced. Currently, used fat collections are again on the upswing, this time at a greater rate than can be accounted for by the normal seasonal upswing. The answer to this phenomenon lies in the fact that fat salvage is now regarded by homemakers as an integral part of kitchen thrift and normal household procedure and has acquired the identity of a habit.

The status of habit which fat salvage currently enjoys was made possible by cooperation of all elements of the campaign. First, of course, is the homemaker, the meat dealer, the renderers, the open market and industry combination, but the entire undertaking would not work or, indeed even be tried without government cooperation and newspaper support. Without any funds used to further the program's objectives the Department of Agriculture's Production & Marketing Administration and Cooperative Extension Service, for example, have pitched in whole-heartedly. The Department of Commerce, the International Emergency Food Council and virtually every other government agency concerned with conservation have helped as well. Newspaper support has been equally important. Daily reminders urging women to save used fats appear in newspapers all over the country and their contribution is incalculable.

INDEX TO ADVERTISERS

Allied Steel & Equip.....	206	Lautier Fils	123
Alrose Chemical Co.....	146	Alan Porter Lee	124
Alsop Engineering Corp.....	6	J. M. Lehmann Co.	119
American-British Chemical Supplies.....	16	George Lueders & Co.....	18
American Colloid Co.....	33	M & H Laboratories.....	75
Ampion Corp.....	122	M. R. M. Co.....	68
Armour & Co.....	66, 92	Magnus, Mabee & Reynard, Inc.....	126
Aromatic Products, Inc.....	90	Manhattan Kreole Products, Inc.....	57
Attapulugus Clay Co.....	32	McCormick & Co.....	85
Baird & McGuire, Inc.....	170, 182	Merck & Co.	46
Barrett Div., Allied Chem. & Dye Corp.....	176	M. Michel & Co.....	53
Alfred J. Bendler	42	Miranol Chemical Co.....	52
Candy & Co.....	78	Moore Bros. Co.....	120
Carbide & Carbon Chem. Corp.....	89, 146	National Aniline Div.....	190
Centflor Mfg. Co.....	15	Newman Tallow & Soap Mach. Co.....	125
Chemical Mfg. & Dist. Co.....	30	Niagara Alkali Co.....	108
Chemical Service of Baltimore.....	22	John Opitz, Inc.....	104
Chicago Sanitary Prods. Co.....	37	Orbis Products Corp.....	4
Clifton Chemical Co.....	121	Peck's Products Co.....	82
Consolidated Products Co.....	145	Pennsylvania Refining Co.....	49
Continental Can Co.....	24	Pfahler-Cleland Co.	140
Davies-Young Soap Co.....	106	Pittsburgh Plate Glass Co., Columbia Chem. Div....	130
Derris, Inc.	51	John Powell & Co.....	10
Wm. Diehl & Co.....	118	Proctor & Schwartz, Inc.....	62
Disco Co.	140	Pylam Products Co.....	40
Dobbins Mfg. Co.....	134	Reilly Tar & Chemical Co.....	38
Dodge & Olcott Inc.....	14	Edw. Remus & Co.....	65
Dow Chemical Co.....	8	Rohm & Haas Co.....	86-87
E. F. Drew & Co., Wecoline Div.....	68	Rosenthal Bercow Co.....	29
P. R. Dreyer, Inc.....	158	C. G. Sargent's Sons Corp.....	60
E. I. du Pont de Nemours & Co.....	2	Schimmel & Co.....	64
Eagle Soap Corp.....	36	Sennewald Drug Co.....	105
Eastern Industries	47	Skinner & Sherman.....	42
Eppenbach, Inc.	206	Foster D. Snell.....	42
Federal Varnish Co.....	74	Solvay Sales Div.....	194-195
Felton Chemical Co.	12	John T. Stanley Co.....	34
J. L. Ferguson Co.....	70	F. W. Steadman Co.....	149
Firmenich & Co.....	26	Stein Equipment Co.....	144
First Machinery Corp.....	144	Stevens Soap Co.....	54
Florasynth Laboratories	Bet. 152 and 153	Stokes & Smith Co.....	72
Benj. French, Inc.	17	Tombarel Products Corp.....	103
Fuld Bros.	20	Uncle Sam Chemical Co.....	56
Geigy Co.	44	Union Carbide & Carbon Corp.....	89, 146
General Drug Co.....	156	U. S. Industrial Chemicals, Inc.....	113
R. Gesell, Inc.....	180	Van Ameringen-Haebler, Inc.....	Bet. 160-161
Givaudan-Delawanna, Inc.	102, 128, 129	R. T. Vanderbilt Co.....	63
Haag Laboratories	109	James Varley & Sons.....	178
W. C. Hardesty Co.....	67	T. F. Washburn Co.....	76
Houchin Machinery Co.....	154	Welch, Holme & Clark Co.....	48
Hudson Mfg. Co.	136	Westvaco Chlorine Prods. Corp.....	132
Hysan Prod. Co.....	50	Windsor Wax Co.....	77
Industrial Raw Materials Corp.....	148	Woburn Chemical Corp.....	69
O. G. Innes Corp.....	83	G. H. Wood & Co.....	164
Kamen Soap Products Co.....	31	Wurster & Sanger, Inc.....	98
Kay-Fries Chemicals, Inc.....	16	G. S. Ziegler & Co.....	150
Kranich Soap Co.....	110		
Lancaster, Allwine & Rommel.....	42		



